SRP-V316/V324/V332/V340

SERVICE MANUAL

J Model
AEP Model
UK Model
E Model

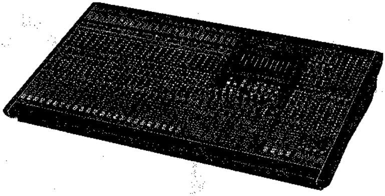

Photo : SRP-V324

AUDIO MIXING CONSOLE

オーディオミキシングコンソール

SONY®

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SECTION 1.
SERVICE NOTE

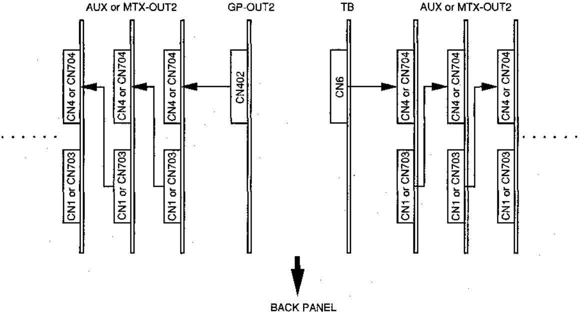
Connection Method of 8P Connectors Across Boards

Connection of 8P connectors across AUX, MTX-OUT2, GP-OUT2, and TB boards is different between right side and left side of MASTER module, as shown below.

1. サービスノート

基板間の 8P コネクタ接続方法

AUX、MTX-OUT2、GP-OUT2、TB 基板間の 8P コネクタの接続は、MASTER モジュールの右側と左側では異なり下図のようになります。



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÉCES SONT CRITIQUES POR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COM- POSANTS QUE PAR DES PIÉCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

サービス，点検時には次のことにご注意下さい。

1. 注意事項をお守りください。
   サービスのとき特に注意を要する個所については，キャビネット，シャーシ，部品などにラベルや捺印で注意事項を表示しています。これらの注意書き及び取扱説明書等の注意事項を必ずお守り下さい。
2. 指定部品のご使用を
   セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は，使用されていたものと同じ特性の部品を使用して下さい。特に回路図，部品表に⚠印で指定されている安全上重要な部品は必ず指定のものをご使用下さい。
3. 部品の取付けや配線の引きまわしは
   もとどおりに
   安全上，チューブやテープなどの絶縁材料を使用したり，プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランパによって発熱部品や高圧部品に接近しないよう配慮されていますので，これらは必ずもとどおりにして下さい。
4. サービス後は安全点検を
   サービスのために取外したネジ，部品，配線がもとどおりになっているか，またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し，安全性が確保されていることを確認して下さい。
5. チップ部品交換時の注意
   - 取外した部品は再使用しないで下さい。
   - タンタルコンデンサのマイナス側は熱に弱いため交換時は注意して下さい。
6. フレキシブルプリント基板の取扱いについて
   - コテ先温度を 270℃前後にして行なって下さい。
   - 同一パターンに何度もコテ先を当てないで下さい。
     (3回以内)
   - パターンに力が加わらないよう注意して下さい。

SECTION 2.
ELECTRICAL ADJUSTMENTS

Adjusting the level of MN-IN1 board

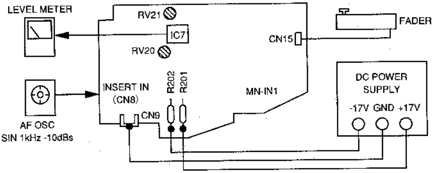
Make an adjustment if PAN control (RV1) was replaced.

[Devices required]

Level meter, Low frequency oscillator, DC power supply, Fader (use by removing from MN-IN assembly)

[Connection]

【接続】


LEVEL METER
RV21
IC7
RV20
CN15
FADER
DC POWER SUPPLY
-17V GND +17V
INSERT IN (CN8)
R202
R201
MN-IN1
CN9
AF OSC
SIN 1kHz -10dBs

[VR, SW setting]

PAN control (RV1): Center

Fader : Max.

[Adjusting method]

Adjust RV20 so that the signal level at IC7 pin1 becomes +7dBs, and RV21 so that the signal level at IC7 pin7 becomes +7dBs.

*Note: The power of +17V and -17V must be both supplied simultaneously.

2. 電気調整要項

MN-IN1 基板レベル調整

PAN ボリューム（RV1）を交換した場合，調整を行います。

【使用機器】

レベルメーター，低周波発振器，直流電源，フェーダー（MN-IN ASSY から取り外して使用）

【VR，SW の設定】

PAN ボリューム（RV1）：センター

フェーダー：MAX

【調整方法】

IC7 1 番ピンの信号レベルが+7dBs になるよう RV20 を，IC7 7 番ピンの信号レベルが+7dBs になるよう RV21 を調整します。

※注意

電源は必ず+17V，-17V 両方を同時に供給してください。

Adjusting the level of ST-IN board

Make an adjustment if BALANCE control (RV302) was replaced.

[Devices required]

Level meter, Low frequency oscillator, DC power supply, Fader (use by removing from ST-IN assembly)

ST-IN 基板レベル調整

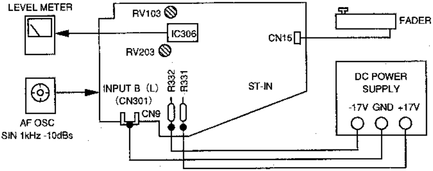
BALANCE ボリューム（RV302）を交換した場合，調整を行います。

【使用機器】

レベルメーター，低周波発振器，直流電源，フェーダー（ST-IN ASSY から取り外して使用）

[Connection]

【接続】


LEVEL METER
RV103
IC306
RV203
CN15
FADER
R332
R331
INPUT B (L)
(CN301)
CN9
ST-IN
DC POWER SUPPLY
-17V GND +17V
AF OSC
SIN 1kHz -10dBs

[VR, SW setting]

Balance control (RV302) : Center
Fader : Max.
B switch (SW301) : ON
L+R switch (SW303) : ON
Other SW : OFF

[Adjusting method]

Adjust RV103 so that the signal level at IC306 pin7 becomes +6dBs, and RV203 so that the signal level at IC306 pin1 becomes +6dBs.

*Note: The power of +17V and -17V must be both supplied simultaneously.

【VR，SW の設定】

BALANCE ボリューム（RV302）：センター
フェーダー：MAX
B スイッチ（SW301）：ON
L+R スイッチ（SW303）：ON
その他のスイッチ：OFF

【調整方法】

IC306 7番ピンの信号レベルが+6dBs になるよう RV103 を，IC306 1番ピンの信号レベルが+6dBs になるよう RV203 を調整します。

※注意

電源は必ず+17V，-17V 両方を同時に供給してください。

Adjusting the balance of ST-OUT board

Adjust the STERO OUT (RV601) if a resistor (* marking in schematic diagram) around IC602 was replaced, or the MONITOR OUT (RV602) if a resistor (* marking in schematic diagram) around IC603 was replaced.

[Devices required]

Oscilloscope, Low frequency oscillator, DC power supply, Fader (use by removing from Master assembly)

ST-OUT基板バランス調整

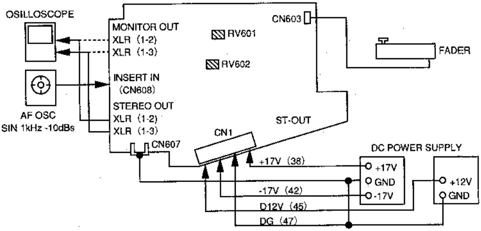
IC602周辺の抵抗（回路図＊印）を交換した場合はSTEREO OUT（RV601），IC603周辺の抵抗（回路図＊印）を交換した場合はMONITOR OUT（RV602）の調整を行います。

【使用機器】

オシロスコープ，低周波発振器，直流電源，フェーダー（MASTER ASSYから取り外して使用）

[Connection]

【接続】


OSILLOSCOPE
MONITOR OUT
XLR (1-2)
XLR (1-3)
RV601
RV602
CN603
FADER
INSERT IN
(CN608)
STEREO OUT
XLR (1-2)
XLR (1-3)
AF OSC
SIN 1kHz -10dBs
ST-OUT
CN1
CN607
DC POWER SUPPLY
+17V (38)
+17V
GND
-17V (42)
-17V
D12V (45)
DG (47)
+12V
GND

[VR, SW setting]

Fader: Max.

[Adjusting method]

Adjust RV601 for STEREO OUT, and RV602 for MONITOR OUT so that the signals across XLR type connector pins 2 and 1, and across pins 3 and 1 are of reverse phases and on almost same level.

*Note: The power of +17V and -17V must be both supplied simultaneously.

【VR，SWの設定】

フェーダー：MAX

【調整方法】

XLRタイプコネクタの2番-1番ピン間と，3番-1番ピン間の信号が逆位相でレベルがほぼ同じになるようSTEREO OUTはRV601を，MONITOR OUTはRV602を調整します。

※注意

電源は必ず+17V，-17V両方を同時に供給してください。

Adjusting the balance of GP-OUT1 board

Adjust the GROUP OUT (RV101) if a resistor (* marking in schematic diagram) around IC104 was replaced, or the AUX OUT (RV201) if a resistor (* marking in schematic diagram) around IC202 was replaced.

GP-OUT1 基板バランス調整

IC104 周辺の抵抗（回路図＊印）を交換した場合は GROUP OUT (RV101)，IC202 周辺の抵抗（回路図＊印）を交換した場合は AUX OUT（RV201）の調整を行います。

[Devices required]

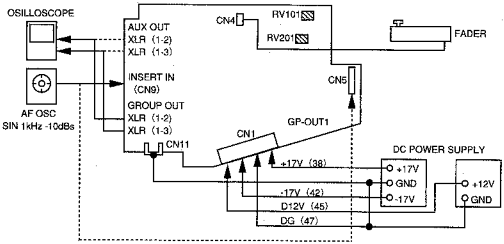
Oscilloscope, Low frequency oscillator, DC power supply, Fader (use by removing from Master assembly)

【使用機器】

オシロスコープ，低周波発振器，直流電源，フェーダー（MASTER ASSY から取り外して使用）

[Connection]

【接続】


OSILLOSCOPE
AUX OUT
XLR (1-2)
XLR (1-3)
INSERT IN
(CN9)
GROUP OUT
XLR (1-2)
XLR (1-3)
CN11
AF OSC
SIN 1kHz -10dBs
CN4
RV101
RV201
FADER
CN5
GP-OUT1
CN1
+17V (38)
-17V (42)
D12V (45)
DG (47)
DC POWER SUPPLY
+17V
GND
-17V
+12V
GND

[VR, SW setting]

Fader: Max.

【VR，SW の設定】

フェーダー：MAX

[GROUP OUT adjusting method]

Connect a low frequency oscillator to the INSERT IN, then adjust RV101 so that the signals across the GROUP OUT XLR type connector pins 2 and 1, and across pins 3 and 1 are of reverse phases and on almost same level.

【GROUP OUT 調整方法】

INSERT IN へ低周波発振器を接続し，GROUP OUT XLR タイプコネクタの 2 番 -1 番ピン間と，3 番 -1 番ピン間の信号が逆位相でレベルがほぼ同じになるよう RV101 を調整します。

[AUX OUT adjusting method]

Connect a low frequency oscillator to the CN5 pins 9 and 8 (GND), then adjust RV201 so that the signals across the AUX OUT XLR type connector pins 2 and 1, and across pins 3 and 1 are of reverse phases and on almost same level.

【AUX OUT 調整方法】

CN5 9 番 -8 番（GND）ピン間へ低周波発振器を接続し，AUX OUT XLR タイプコネクタの 2 番 -1 番ピン間と，3 番 -1 番ピン間の信号レベルがほぼ同じになるよう RV201 を調整します。

*Note: The power of +17V and -17V must be both supplied simultaneously.

※注意

電源は必ず +17V，-17V 両方を同時に供給してください。

Adjusting the balance of MTX-OUT 1 & 2 board

Adjust the MATRIX OUT1 (RV614) if a resistor (* marking in schematic diagram) around IC608 on the MTX-OUT1 board was replaced, or the MATRIX OUT2 (RV720) if a resistor (* marking in schematic diagram) around IC704 on the MTX-OUT2 board was replaced.

MTX-OUT1/2 基板バランス調整

MTX-OUT1 IC608 周辺の抵抗（回路図＊印）を交換した場合はMATRIX OUT1（RV614），MTX-OUT2 IC704 周辺の抵抗（回路図＊印）を交換した場合はMATRIX OUT2（RV720）の調整を行います。

[Devices required]

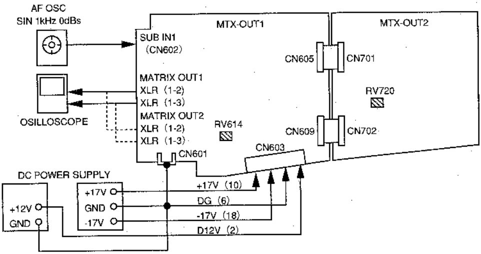
Oscilloscope, Low frequency oscillator, DC power supply

【使用機器】

オシロスコープ，低周波発振器，直流電源

[Connection]

【接続】


AF OSC
SIN 1kHz 0dBs
OSILLOSCOPE
MTX-OUT1
MTX-OUT2
SUB IN1
(CN602)
CN605
CN701
MATRIX OUT1
XLR (1-2)
XLR (1-3)
RV720
MATRIX OUT2
XLR (1-2)
XLR (1-3)
RV614
CN609
CN702
CN603
CN601
DC POWER SUPPLY
+17V
GND
-17V
+12V
GND
+17V (10)
DG (6)
-17V (18)
D12V (2)

[VR, SW setting]

SUB1 controls (RV601, RV701) : Max.
MASTER controls (RV613, RV713) : Max.

【VR，SW の設定】

SUB1 ボリューム（RV601，RV701）：MAX
MASTER ボリューム（VR613，VR713）：MAX

[Adjusting method]

Adjust RV614 for MATRIX OUT1, and RV720 for MATRIX OUT2 so that the signals across XLR type connector pins 2 and 1, and across pins 3 and 1 are of reverse phases and on almost same level.

*Note: The power of +17V and -17V must be both supplied simultaneously.

【調整方法】

XLR タイプコネクタの2番-1番ピン間と，3番-1番ピン間の信号が逆位相でレベルがほぼ同じになるよう MATRIX OUT1 は RV614 を，MATRIX OUT2 は RV720 を調整します。

※注意

電源は必ず+17V，-17V 両方を同時に供給してください。

SECTION 3. DIAGRAMS

3. ダイヤグラム

3-1. IC PIN FUNCTION DESCRIPTION

CPU BOARD IC205 (HD6475208P10)

Pin No.	Pin Name	I/O	Description
1	EXTAL	I	A crystal oscillator connection pins.
2	XTAL	O	
4	IRQ0	I	CPU mount SW ON interrupt pin. At SW ON, it goes low to read ON/OFF of switches.
5	IRQ1	I	SW ON interrupt pin for modules mounted on GP-OUT2 and left side of MASTER module. At SW ON, it goes low to read ON/OFF of switches.
6	IRQ2	I	SW ON interrupt pin for modules mounted on TB and right side of MASTER module. At SW ON, it goes low to read ON/OFF of switches.
7	P1-4	I	EEPROM (IC204) writing completion monitoring pin.
9	RD	O	At low, memory read status
10	WR	O	At low, memory write status
11	VCC	I	Power supply pin (+5V)
12-14	MD0-2	I	CPU operation mode setting pin
15	RES	I	Reset pin. At low, it resets IC.
16	NMI	I	Supply voltage monitoring pin. At low, it writes current operation status to EEPROM.
17	VSS	I	GND pin
18-25	D0-D7	I/O	Data bus
26-38	A0-A12	O	Address bus
42	VCC	I	Power supply pin (+5V)
43-45	P5-0 - P5-2	O	Signal level reading channel selection pins
46-48	P5-3 - P5-5	O	Serial data transmitting channel selection pins
49	P5-6	O	Transmitted serial data loading pin
50	P5-7	O	Received serial data loading pin
51	VSS	I	GND pin
52	AVSS	I	GND pin for CPU built-in A/D converter
53	AN0	I	GROUP, AUX, MATRIX output signal level reading pin (VU response)
54	AN1	I	GROUP, AUX, MATRIX output signal level reading pin (PEAK response)
55	AN2	I	ST output signal level reading pin (VU response)
56	AN3	I	ST output signal level reading pin (PEAK response)
57	AVCC	I	Power supply pin (+5V) for CPU built-in A/D converter
58	TXD2	0	Serial data transmission pin (clock sync type)
59	RXD2	I	Serial data reception pin (clock sync type)
60	SCK2	O	Clock pin for serial data transmission/reception
61	TXD1	O	Serial data transmission pin (for MIDI pin)
62	RXD2	I	Serial data reception pin (for MIDI pin)
63	P7-5	O	Meter mound LED OFF pin. At high, it turns off LED.
64	VSS	I	GND pin

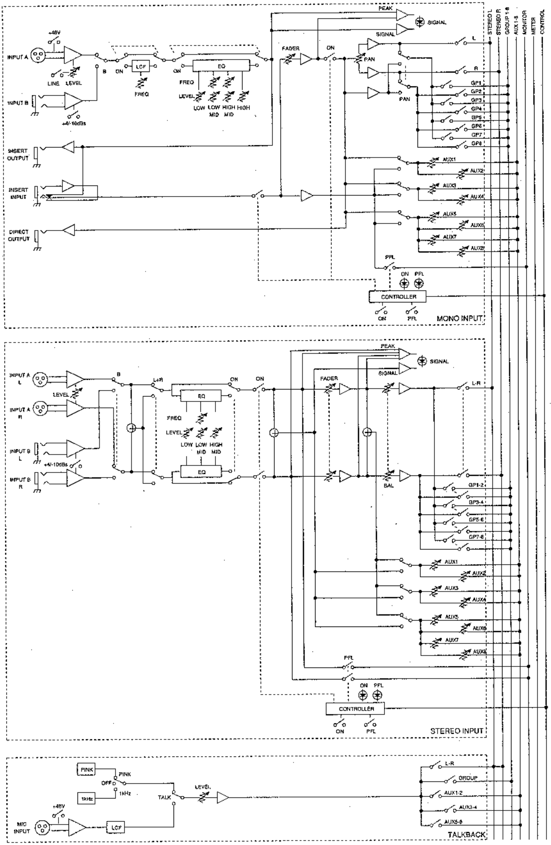
3-1. ICピン端子説明

CPU基板　IC205　(HD6475208P10)

端子番号	端子名	入力／出力	端子説明
1	EXTAL	入力	水晶発振子接続端子
2	XTAL	出力	
4	IRQ0	入力	CPU MOUNT SWオン割り込み端子　SWオンでLOWになりSWのオン／オフを読み取る
5	IRQ1	入力	GP-OUT2及びMASTERモジュール左側に装着されたモジュールのSWオン割り込み端子　SWオンでLOWになりSWのオン／オフを読み取る
6	IRQ2	入力	TB及びMASTERモジュール右側に装着されたモジュールのSWオン割り込み端子　SWオンでLOWになりSWのオン／オフを読み取る
7	P1-4	入力	EEPROM（IC204）の書き込み完了監視用端子
9	RD	出力	LOWでメモリー読み出し状態
10	WR	出力	LOWでメモリー書き込み状態
11	VCC	入力	電源端子（+5V）
12-14	MD0-2	入力	CPU動作モード設定端子
15	RES	入力	リセット端子　LOWでリセット
16	NMI	入力	電源電圧監視端子　LOWでEEPROMに現在の動作状態を書き込む
17	VSS	入力	GND端子
18-25	D0-D7	入出力	データバス
26-38	A0-A12	出力	アドレスバス
42	VCC	入力	電源端子（+5V）
43-45	P5-0 - P5-2	出力	信号レベル読み取りチャンネル選択端子
46-48	P5-3 - P5-5	出力	シリアルデーター送信チャンネル選択端子
49	P5-6	出力	送信シリアルデータロード端子
50	P5-7	出力	受信シリアルデータロード端子
51	VSS	入力	GND端子
52	AVSS	入力	CPU内蔵A/Dコンバーター用GND端子
53	AN0	入力	GROUP,AUX,MATRIX出力信号レベル読み取り端子（VU応答）
54	AN1	入力	GROUP,AUX,MATRIX出力信号レベル読み取り端子（PEAK応答）
55	AN2	入力	ST出力信号レベル読み取り端子（VU応答）
56	AN3	入力	ST出力信号レベル読み取り端子（PEAK応答）
57	AVCC	入力	CPU内蔵A/Dコンバーター用電源端子（+5V）
58	TXD2	出力	シリアルデータ送信端子（クロック同期式）
59	RXD2	入力	シリアルデータ受信端子（クロック同期式）
60	SCK2	出力	シリアルデータ送受信用クロック端子
61	TXD1	出力	シリアルデータ送信端子（MIDI端子用）
62	RXD2	入力	シリアルデータ受信端子（MIDI端子用）
63	P7-5	出力	METER M't LED消灯端子　HIで消灯
64	VSS	入力	GND端子

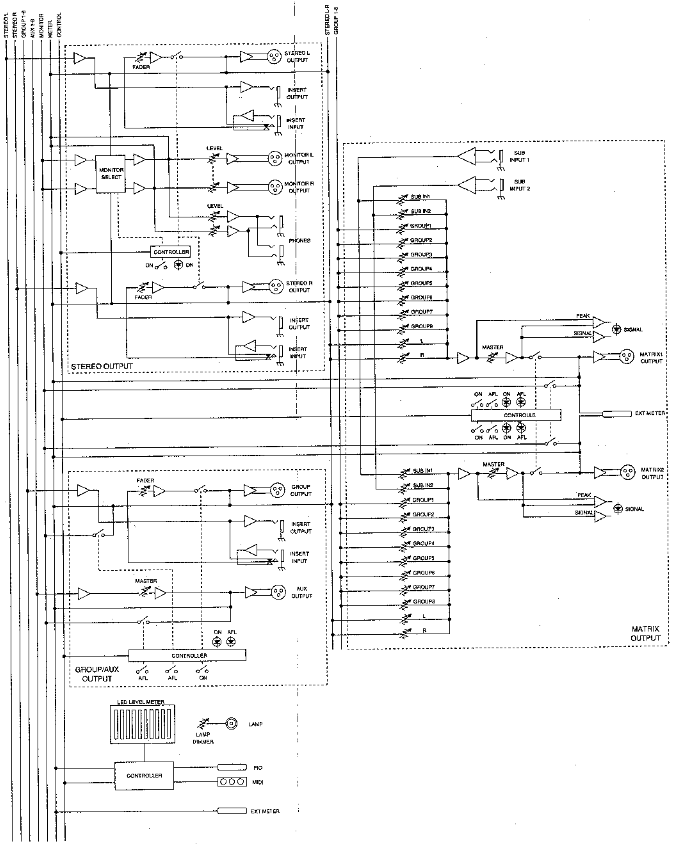
3-2. BLOCK DIAGRAM (1)

3-2. ブロックダイヤグラム（1）


STEREO L
STEREO R
GROUP 1-8
AUX 1-8
MONITOR
METER
CONTROL
+48V
INPUT A
INPUT B
LINE
LEVEL
+4/-10dBs
B
ON
LCF
FREQ
EQ
FREQ
LEVEL
LOW
LOW MID
HIGH MID
HIGH
PEAK
SIGNAL
FADER
ON
PAN
L
R
GP1
GP2
GP3
GP4
GP5
GP6
GP7
GP8
INSERT OUTPUT
INSERT INPUT
DIRECT OUTPUT
AUX1
AUX2
AUX3
AUX4
AUX5
AUX6
AUX7
AUX8
PFL
ON
PFL
CONTROLLER
ON
PFL
MONO INPUT
INPUT A L
INPUT A R
INPUT B L
INPUT B R
LEVEL
B
L+R
EQ
FREQ
LEVEL
LOW
LOW MID
HIGH MID
ON
FADER
BAL
L-R
GP1-2
GP3-4
GP5-6
GP7-8
STEREO INPUT
PINK
OFF
1kHz
TALK
LEVEL
MIC INPUT
LCF
L-R
GROUP
AUX1-2
AUX3-4
AUX5-8
TALKBACK

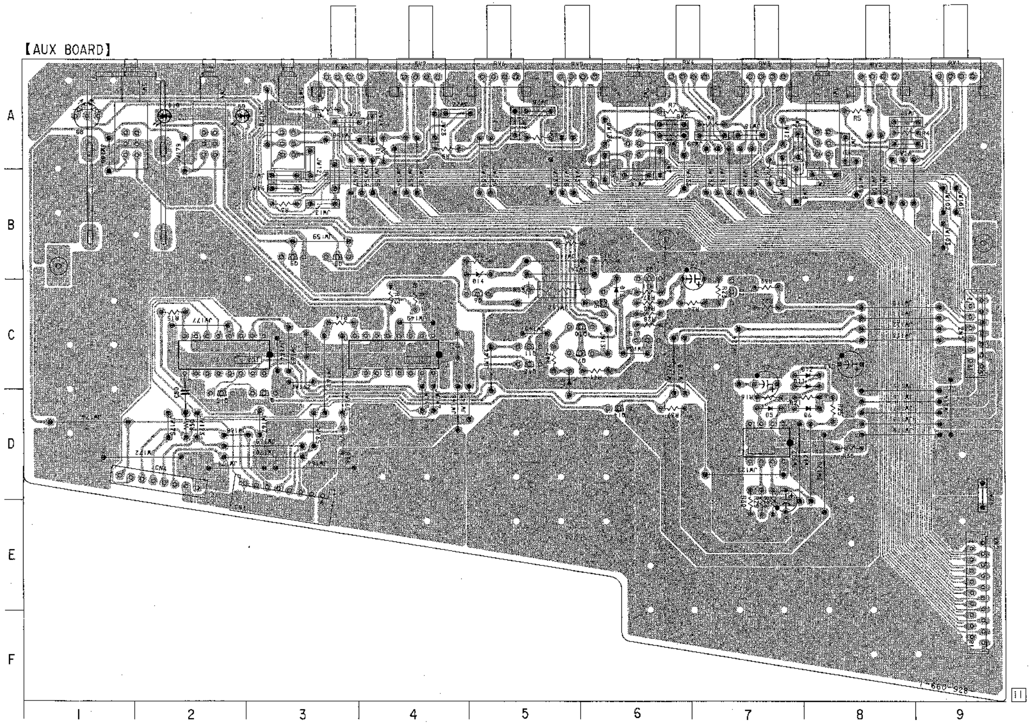
3-3. BLOCK DIAGRAM (2)

3-3. ブロックダイヤグラム（2）


STEREO L
STEREO R
GROUP 1-8
AUX 1-8
MONITOR
METER
CONTROL
STEREO L-R
GROUP 1-8
FADER
STEREO L OUTPUT
INSERT OUTPUT
INSERT INPUT
MONITOR SELECT
LEVEL
MONITOR L OUTPUT
MONITOR R OUTPUT
LEVEL
PHONES
CONTROLLER
ON
ON
FADER
STEREO R OUTPUT
INSERT OUTPUT
INSERT INPUT
STEREO OUTPUT
SUB INPUT 1
SUB INPUT 2
SUB IN1
SUB IN2
GROUP1
GROUP2
GROUP3
GROUP4
GROUP5
GROUP6
GROUP7
GROUP8
L
R
PEAK
SIGNAL
SIGNAL
MASTER
MATRIX1 OUTPUT
ON
AFL
ON
AFL
CONTROLLE
EXT METER
MATRIX2 OUTPUT
MATRIX OUTPUT
FADER
GROUP OUTPUT
INSERT OUTPUT
INSERT INPUT
MASTER
AUX OUTPUT
ON
AFL
CONTROLLER
AFL
AFL
ON
GROUP/AUX OUTPUT
LED LEVEL METER
LAMP DIMMER
LAMP
CONTROLLER
PIO
MIDI
EXT METER

3-4. PRINTED WIRING BOARDS – AUX Section –

3-4. プリント図ー AUX 基板ー


【AUX BOARD】
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
RV1
RV2
RV3
RV4
RV5
RV6
RV7
RV8
CN4
IC1
IC2
IC3
11

• AUX BOARD Location

Ref. No.	Location
CN1	E-3
CN2	C-9
CN3	E-9
CN4	D-2
D5	D-7
D6	D-8
D7	C-5
D8	A-1
D9	A-2
D10	A-2
D11	C-8
D12	C-8
D13	C-6
D14	B-5
IC1	C-4
IC2	C-2
IC3	D-7
Q1	D-3
Q2	C-7
Q3	B-6
Q5	C-6
Q6	C-5
Q7	C-6
Q8	B-3
Q9	B-3
Q10	C-6
Q11	C-5
Q12	C-5
Q13	D-2
Q14	D-6
Q15	C-6

Note on Printed Wiring Board:

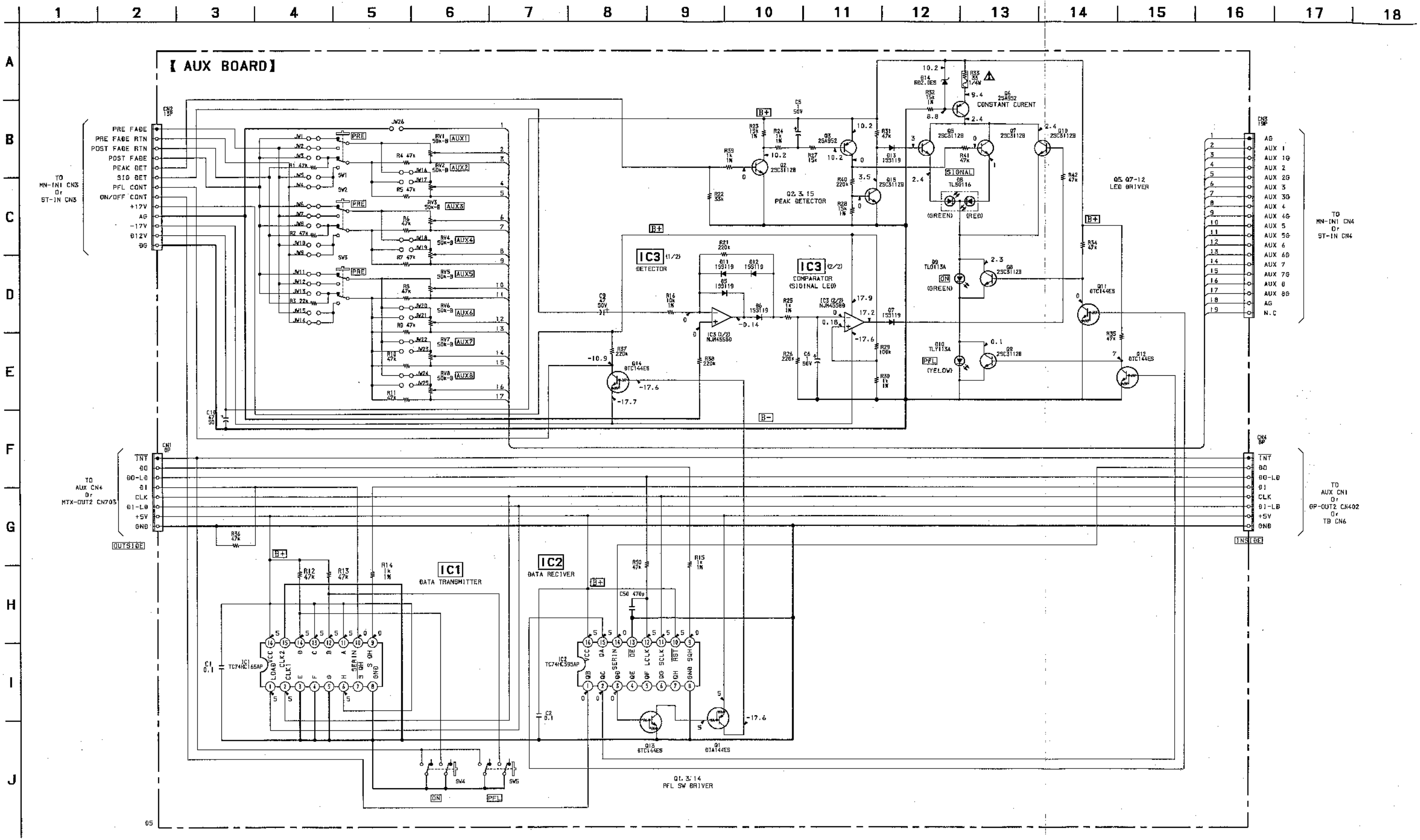
- ○—— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

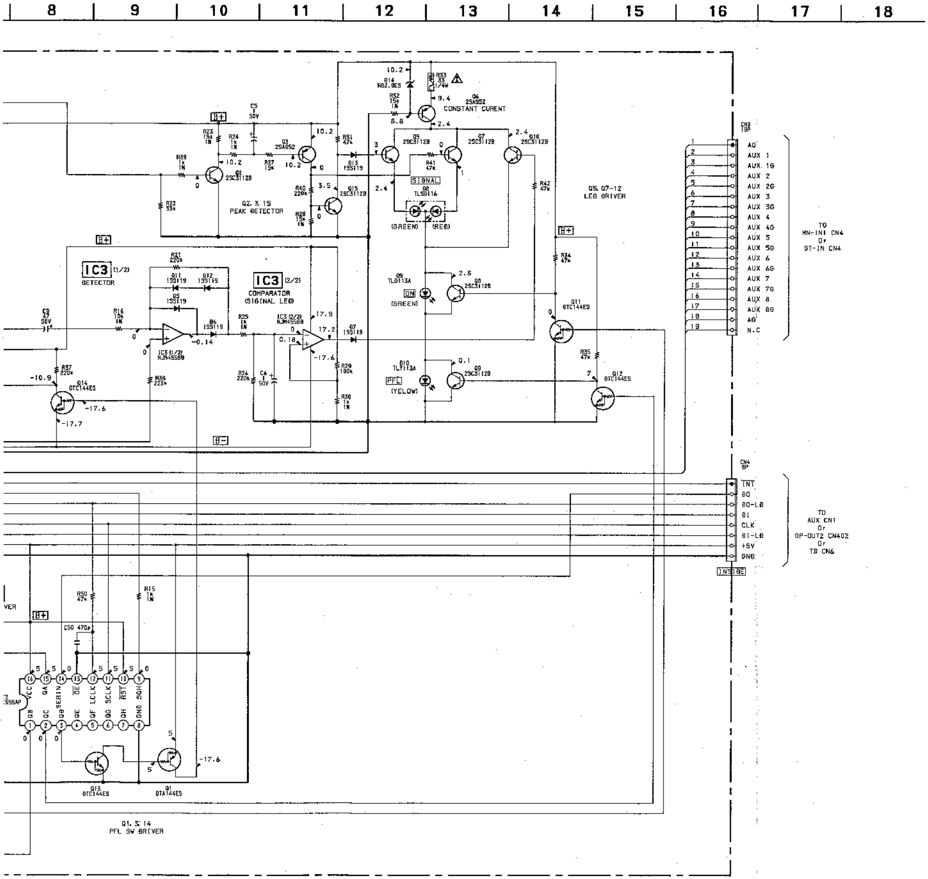
プリント図ノート

- ○——：部品面側取付のリード線。
- ▨：見ている面側のパターン。

3-5. SCHEMATIC DIAGRAM – AUX Board –

3-5. 回路図－AUX 基板－


【AUX BOARD】
CN2 13P
PRE FADE
PRE FADE RTN
POST FADE RTN
POST FADE
PEAK DET
SIG DET
PFL CONT
ON/OFF CONT
+17V
AG
-17V
D12V
DG
TO MN-IN1 CN3 Or ST-IN CN3
SW1
SW2
SW3
PRE
AUX1
AUX2
AUX3
AUX4
AUX5
AUX6
AUX7
AUX8
IC3 (1/2) DETECTOR
IC3 (2/2) COMPARATOR (SIGNAL LED)
Q2, 3, 15 PEAK DETECTOR
Q6 2SA952 CONSTANT CURENT
SIGNAL
(GREEN)
(RED)
Q5, Q7-12 LED DRIVER
ON (GREEN)
PFL (YELLOW)
B+
B-
CN3 19P
AG
AUX 1
AUX 1G
AUX 2
AUX 2G
AUX 3
AUX 3G
AUX 4
AUX 4G
AUX 5
AUX 5G
AUX 6
AUX 6G
AUX 7
AUX 7G
AUX 8
AUX 8G
AG
N.C
TO MN-IN1 CN4 Or ST-IN CN4
CN1 8P
INT
D0
D0-LD
D1
CLK
D1-LD
+5V
GND
TO AUX CN4 Or MTX-OUT2 CN703
OUTSIDE
CN4 8P
TO AUX CN1 Or DP-OUT2 CN402 Or TB CN6
INSIDE
IC1 DATA TRANSMITTER
IC1 TC74HC165AP
IC2 DATA RECIVER
IC2 TC74HC595AP
Q1, 3, 14 PFL SW DRIVER
SW4
SW5
ON
PFL
Q13 DTC144ES
Q1 DTA144ES
05


8
9
10
11
12
13
14
15
16
17
18
B+
C5
50V
R23 15k 1%
R24 1k 1%
R39 1k 1%
Q2 2SC3112B
R27 15k
Q3 2SA952
10.2
R31 47k
D13 1SS119
R22 33k
Q2, 3, 15
PEAK DETECTOR
R40 220k
3.5
Q15 2SC3112B
R28 15k 1%
D14 RD2.0ES
R33 33 1/4W
R32 15k 1%
9.4
8.8
Q6 2SA952
CONSTANT CURENT
2.4
Q5 2SC3112B
Q7 2SC3112B
Q10 2SC3112B
R41 47k
SIGNAL
D8 TLSG116
(GREEN)
(RED)
R42 47k
Q5, Q7-12
LED DRIVER
IC3 (1/2)
DETECTOR
R21 220k
D11 1SS119
D12 1SS119
D5 1SS119
D6 1SS119
IC3 (2/2)
COMPARATOR
(SIGINAL LED)
C9 47 50V
R16 10k 1%
IC3 (1/2) NJM4558D
-0.14
R25 1k 1%
IC3 (2/2) NJM4558D
17.9
17.2
0.18
-17.6
D7 1SS119
R29 100k
R30 1k 1%
R26 220k
C6 1 50V
R37 220k
-10.9
Q14 DTC144ES
-17.7
R38 220k
B-
D9 TLG113A
ON
(GREEN)
2.3
Q8 2SC3112B
D10 TLY113A
PFL
(YELOW)
0.1
Q9 2SC3112B
R34 47k
Q11 DTC144ES
R35 47k
Q12 DTC144ES
CN3 19P
AG
AUX 1
AUX 1G
AUX 2
AUX 2G
AUX 3
AUX 3G
AUX 4
AUX 4G
AUX 5
AUX 5G
AUX 6
AUX 6G
AUX 7
AUX 7G
AUX 8
AUX 8G
AG
N.C
TO
MN-INI CN4
Or
ST-IN CN4
CN4 8P
INT
DO
DO-LD
DI
CLK
DI-LD
+5V
GND
TO
AUX CN1
Or
GP-OUT2 CN402
Or
TB CN6
INSIDE
VER
R50 47k
R15 1k 1%
C50 470p
595AP
VCC
QA
SERIN
OE
LCLK
SCLK
RST
SQH
QB
QC
QD
QE
QF
QG
QH
GND
Q13 DTC144ES
Q1 DTA144ES
Q1, 3, 14
PFL SW DRIVER

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : fusible resistor.
- ▭ : panel designation.
- B + : B+ Line.
- B − : B- Line.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

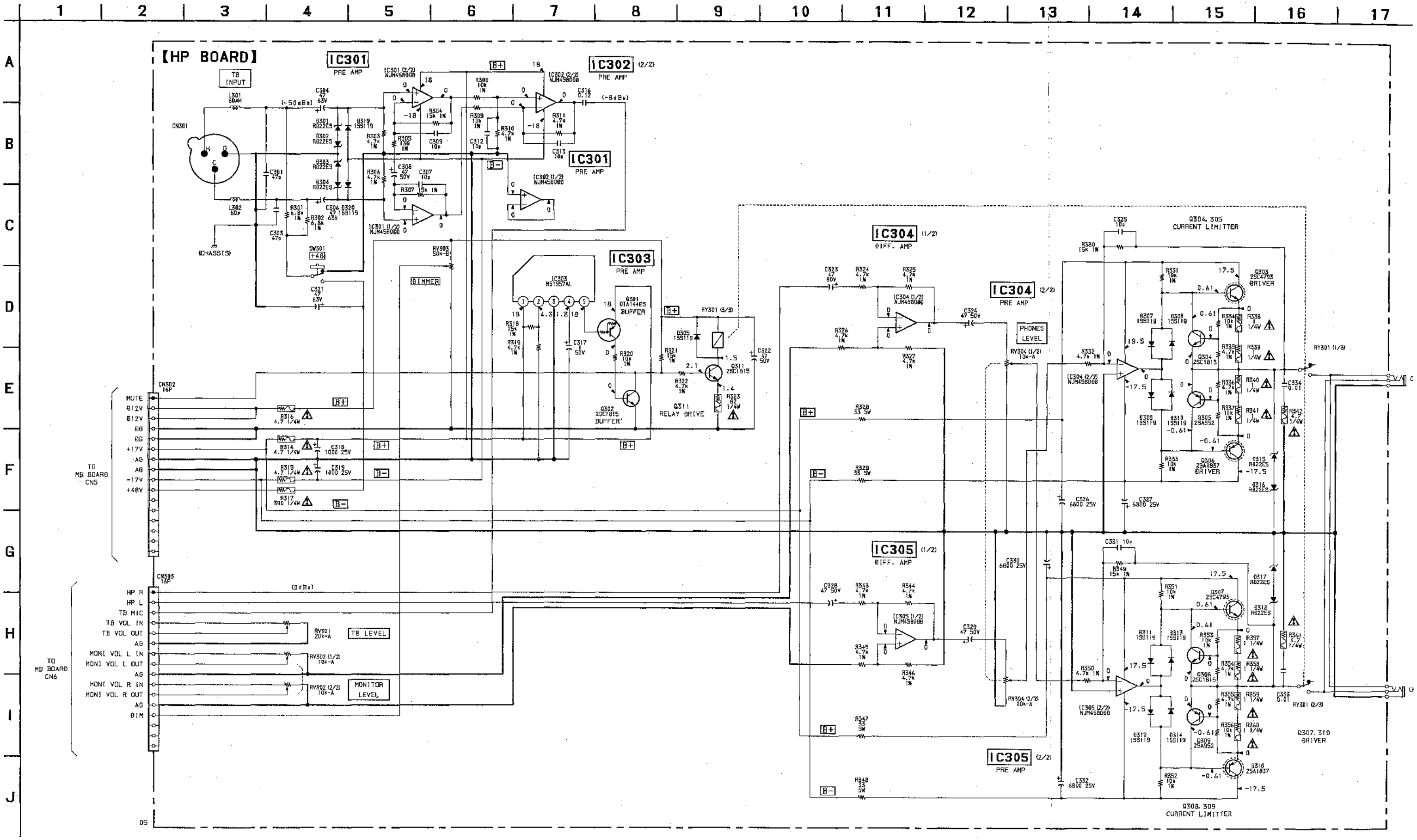
回路図ノート

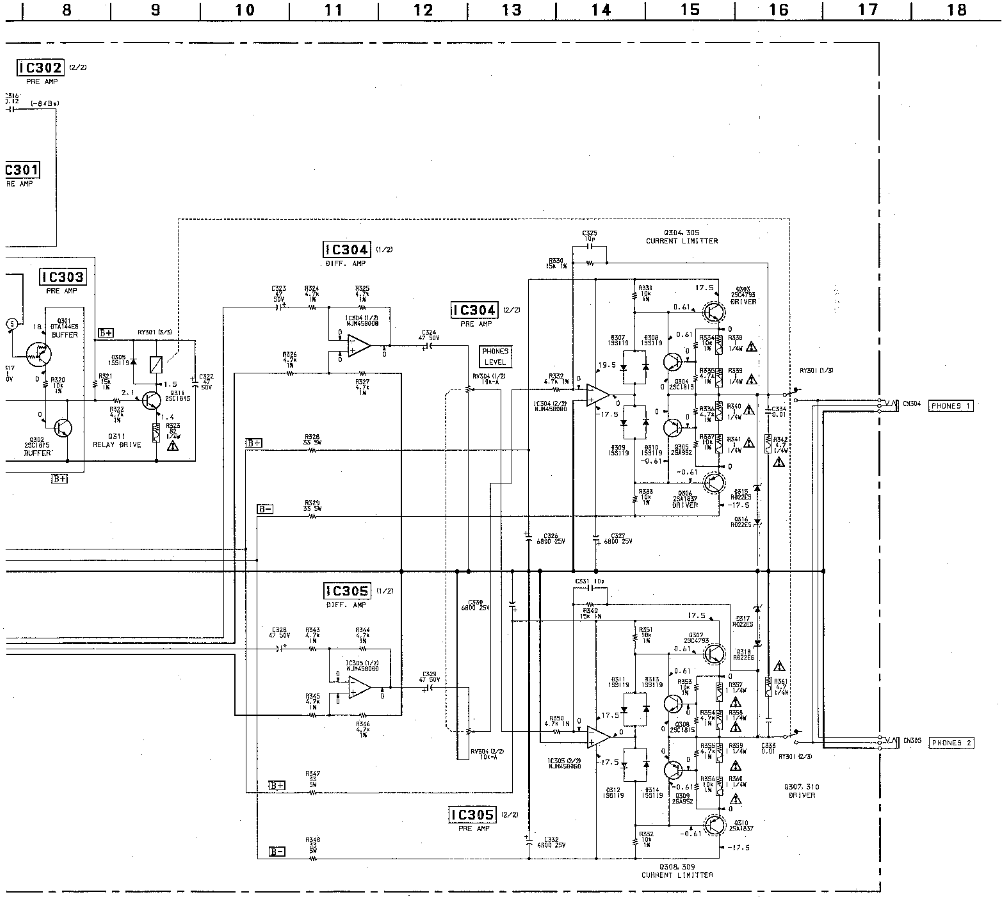
- ケミコン、タンタルを除くコンデンサで、耐圧50V以下のものは、その耐圧を省略。単位はすべてµF（pはpF)。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- ：ヒューズ抵抗。
- ▭ ：パネル表示名称。
- B + ：B＋ライン。
- B − ：B－ライン。

⚠印の部品，または⚠印付きの点線で囲まれた部品は、安全性を維持するために、重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

3-6. SCHEMATIC DIAGRAM – HP Board –

3-6. 回路図ー HP 基板ー


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
【HP BOARD】
TB INPUT
CN301
(CHASSIS)
IC301
PRE AMP
IC302 (2/2)
PRE AMP
IC301
PRE AMP
IC303
PRE AMP
IC303 M51957AL
Q301 DTA144ES BUFFER
Q302 2SC1815 BUFFER
Q311 2SC1815 RELAY DRIVE
RY301 (3/3)
SW301 +48
RV303 50k-B
DIMMER
(-50dBs)
(-8dBs)
B+
B-
IC304 (1/2)
DIFF. AMP
IC304 (2/2)
PRE AMP
PHONES LEVEL
RV304 (1/2) 10k-A
RV304 (2/2) 10k-A
IC305 (1/2)
DIFF. AMP
IC305 (2/2)
PRE AMP
Q304, 305 CURRENT LIMITTER
Q308, 309 CURRENT LIMITTER
Q303 2SC4793 DRIVER
Q306 2SA1837 DRIVER
Q307, 310 DRIVER
RY301 (1/3)
RY301 (2/3)
CN302 16P
MUTE
B12V
B12V
BG
BG
+17V
AG
AG
-17V
+48V
TO MB BOARD CN5
CN303 16P
HP R
HP L
TB MIC
TB VOL IN
TB VOL OUT
AG
MONI VOL L IN
MONI VOL L OUT
AG
MONI VOL R IN
MONI VOL R OUT
AG
BIM
TO MB BOARD CN6
(0dBs)
RV301 20k-A
TB LEVEL
RV302 (1/2) 10k-A
RV302 (2/2) 10k-A
MONITOR LEVEL


8
9
10
11
12
13
14
15
16
17
18
IC302 (2/2)
PRE AMP
C316
0.12
(-8dBs)
C301
RE AMP
IC303
PRE AMP
Q301
DTA144ES
BUFFER
18
0
R320
10k
1%
Q302
2SC1815
BUFFER
B+
RY301 (3/3)
D305
1SS119
R321
15k
1%
2.1
1.5
1.4
Q311
2SC1815
R322
4.7k
1%
R323
82
1/4W
Q311
RELAY DRIVE
C322
47
50V
IC304 (1/2)
DIFF. AMP
C323
47
50V
R324
4.7k
1%
R325
4.7k
1%
IC304 (1/2)
NJM4580DD
R326
4.7k
1%
R327
4.7k
1%
C324
47 50V
IC304 (2/2)
PRE AMP
PHONES LEVEL
RV304 (1/2)
10k-A
R328
33 5W
B-
R329
33 5W
C325
10p
R330
15k 1%
Q304, 305
CURRENT LIMITTER
R332
4.7k 1%
IC304 (2/2)
NJM4580DD
19.5
-17.5
D307
1SS119
D308
1SS119
D309
1SS119
D310
1SS119
R331
10k
1%
17.5
0.61
Q303
2SC4793
DRIVER
Q304
2SC1815
Q305
2SA952
-0.61
R333
10k
1%
Q306
2SA1837
DRIVER
R334
10k
1%
R335
4.7k
1%
R336
4.7k
1%
R337
10k
1%
R338
1
1/4W
R339
1
1/4W
R340
1
1/4W
R341
1
1/4W
R342
4.7
1/4W
C334
0.01
D315
RD22ES
D316
RD22ES
RY301 (1/3)
CN304
PHONES 1
C326
6800 25V
C327
6800 25V
IC305 (1/2)
DIFF. AMP
C328
47 50V
R343
4.7k
1%
R344
4.7k
1%
IC305 (1/2)
NJM4580DD
R345
4.7k
1%
R346
4.7k
1%
C329
47 50V
C330
6800 25V
RV304 (2/2)
10k-A
R347
33
5W
R348
33
5W
IC305 (2/2)
PRE AMP
C331 10p
R349
15k 1%
R350
4.7k 1%
IC305 (2/2)
NJM4580DD
D311
1SS119
D312
1SS119
D313
1SS119
D314
1SS119
R351
10k
1%
Q307
2SC4793
R353
10k
1%
R354
4.7k
1%
R355
4.7k
1%
R356
10k
1%
Q308
2SC1815
Q309
2SA952
R352
10k
1%
Q310
2SA1837
R357
1 1/4W
R358
1 1/4W
R359
1 1/4W
R360
1 1/4W
R361
4.7
1/4W
D317
RD22ES
D318
RD22ES
C333
0.01
RY301 (2/3)
CN305
PHONES 2
Q307, 310
DRIVER
C332
6800 25V
Q308, 309
CURRENT LIMITTER

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B- Line.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

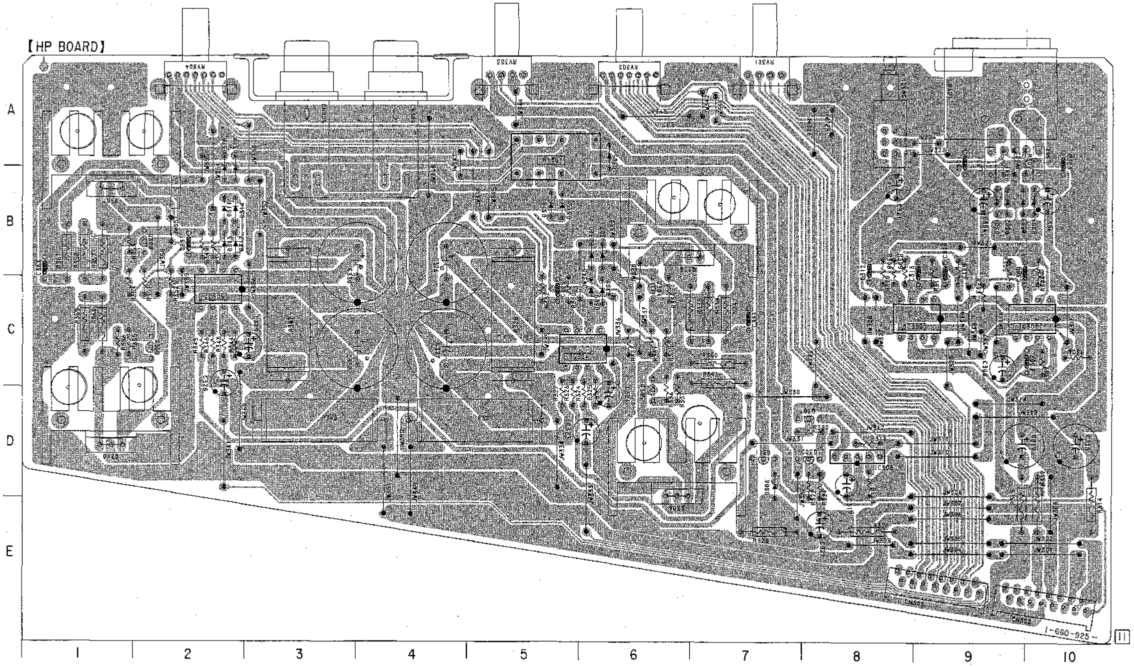
回路図ノート

- ケミコン、タンタルを除くコンデンサで，耐圧50V以下のものは，その耐圧を省略。単位はすべてμF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- ▭：不燃性抵抗。
- ▭：ヒューズ抵抗。
- ▭　：パネル表示名称。
- B＋　：B＋ライン。
- B－　：B－ライン。

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

3-7. PRINTED WIRING BOARD – HP Board –

3-7. プリント図ーHP基板ー


【HP BOARD】
RV304
RV303
RV302
RV301
CN301
CN302
1-660-925-
11
A
B
C
D
E
1
2
3
4
5
6
7
8
9
10

• HP Board Location

Ref. No.	Location	Ref. No.	Location
CN301	A-9	D318	B-2
CN302	E-10		
CN303	E-9	IC301	C-10
CN304	A-4	IC302	C-9
CN305	A-3	IC303	D-8
		IC304	C-6
D301	B-9	IC305	C-2
D302	B-9		
D303	B-10	Q301	D-8
D304	B-10	Q302	D-8
D305	A-6	Q303	B-6
D307	B-6	Q304	C-6
D308	C-6	Q305	D-6
D309	C-6	Q306	D-6
D310	B-6	Q307	B-1
D311	B-2	Q308	B-2
D312	B-2	Q309	C-2
D313	B-2	Q310	D-1
D314	B-2	Q311	D-7
D315	B-5		
D316	B-5		
D317	B-2		

Note on Printed Wiring Board:

- o—— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

プリント図ノート

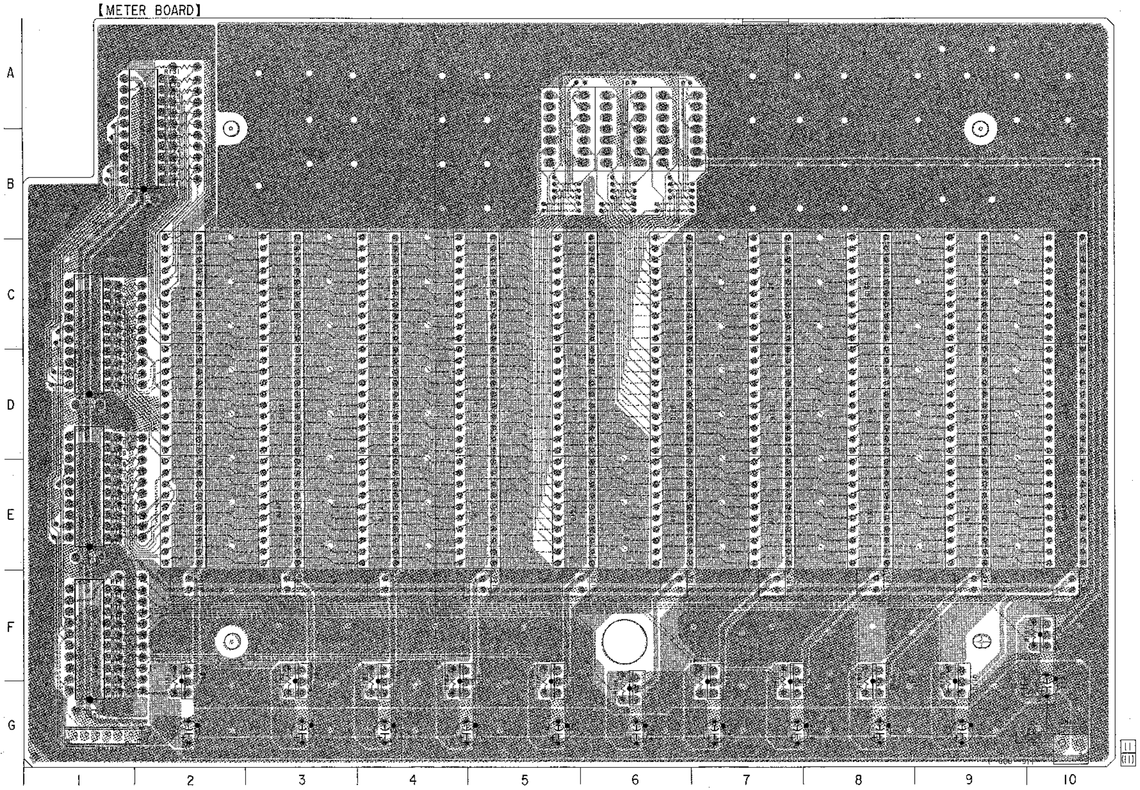
- o——：部品面側取付のリード線。
- ▨：見ている面側のパターン。

3-8. PRINTED WIRING BOARD – METER Board –

3-8. プリント図ー METER 基板ー

• METER BOARD Location

Ref. No.	Location	Ref. No.	Location
Q101	F-2	D122	E-5
Q102	F-3	D123	D-5
Q103	F-4	D124	C-5
Q104	F-5	D126	F-6
Q105	F-5	D127	E-6
Q106	G-6	D128	D-6
Q107	F-7	D129	C-6
Q108	F-7	D131	F-7
Q109	F-8	D132	E-7
Q110	F-9	D133	D-7
Q111	F-10	D134	C-7
		D136	F-8
CN101	G-10	D137	E-8
CN102	G-1	D138	D-8
		D139	C-8
D101	F-2	D141	F-9
D102	E-2	D142	E-9
D103	D-2	D143	D-9
D104	C-2	D144	C-9
D106	F-3	D148	F-10
D107	E-3	D149	E-10
D108	D-3	D150	D-10
D109	C-3	D151	C-10
D111	F-4	D152	B-5
D112	E-4	D153	B-6
D113	D-4	D154	B-6
D114	C-4		
D116	F-5	IC101	F-1
D117	E-5	IC102	A-2
D118	D-5	IC103	C-1
D119	C-5	IC104	E-1
D121	F-5		



Note on Printed Wiring Board:

- o——— : parts extracted from the component side.
- ░ : Pattern of the rear side.
- ▒ : Pattern from the side which enables seeing.

プリント図ノート

- o——— : 部品面側取付のリード線。
- ░ : 裏側のパターン。
- ▒ : 見ている面側のパターン。

Note on Schematic Diagram:

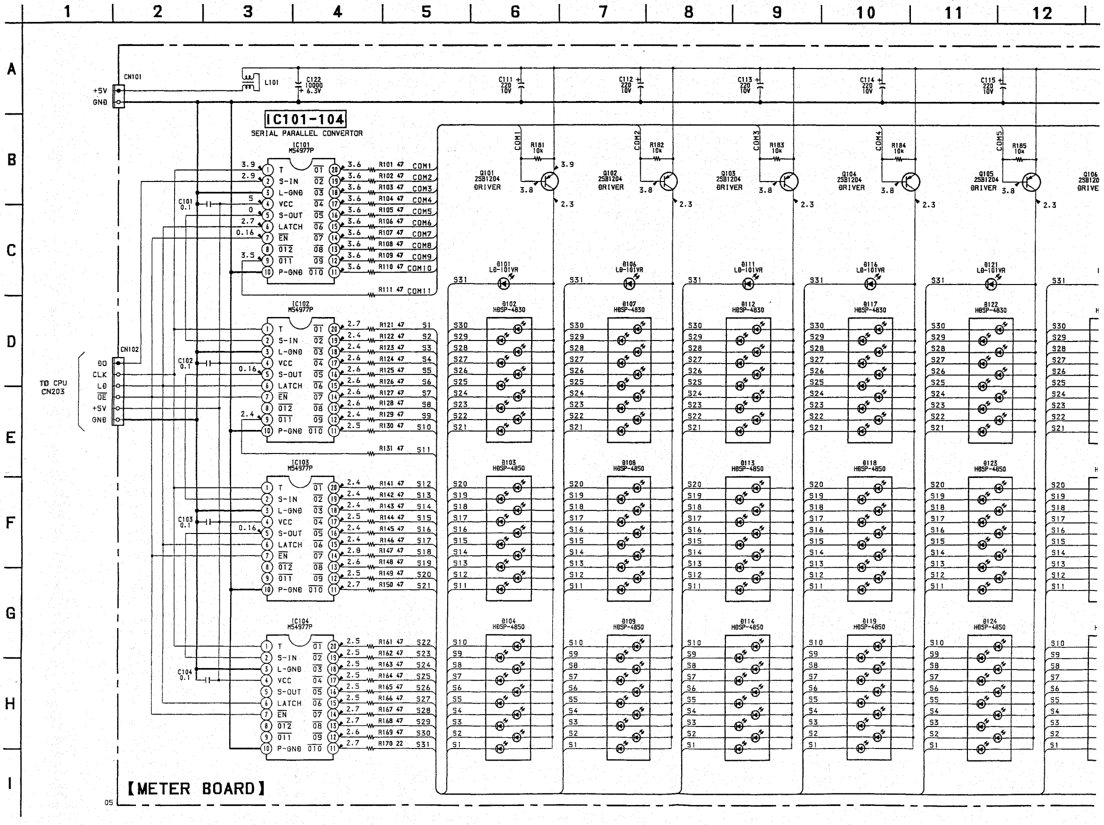
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹/₄ W or less unless otherwise specified.
- B+ : B+ Line.

回路図ノート

- ケミコン、タン のは、その耐圧
- 抵抗で指示のな
- %は許容差を示
- B+ :B+

3-9. SCHEMATIC DIAGRAM – METER Board –

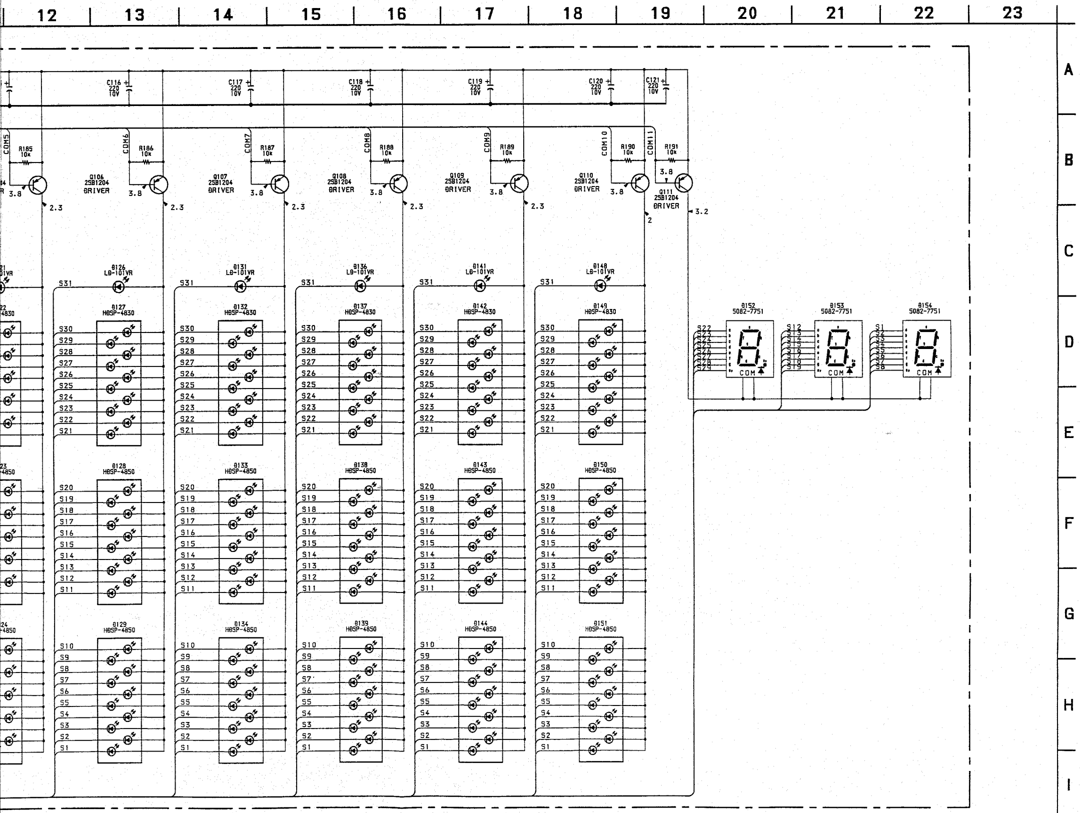
3-9. 回路図– METER 基板–



1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
CN101
+5V
GND
L101
C122 10000 6.3V
C111 220 10V
C112 220 10V
C113 220 10V
C114 220 10V
C115 220 10V
IC101-104
SERIAL PARALLEL CONVERTOR
IC101 M54977P
IC102 M54977P
IC103 M54977P
IC104 M54977P
T
S-IN
L-GND
VCC
S-OUT
LATCH
EN
O12
O11
P-GND
O1
O2
O3
O4
O5
O6
O7
O8
O9
O10
C101 0.1
C102 0.1
C103 0.1
C104 0.1
CN102
TO CPU CN203
DO
CLK
LD
OE
+5V
GND
R101 47 COM1
R102 47 COM2
R103 47 COM3
R104 47 COM4
R105 47 COM5
R106 47 COM6
R107 47 COM7
R108 47 COM8
R109 47 COM9
R110 47 COM10
R111 47 COM11
R121 47 S1
R122 47 S2
R123 47 S3
R124 47 S4
R125 47 S5
R126 47 S6
R127 47 S7
R128 47 S8
R129 47 S9
R130 47 S10
R131 47 S11
R141 47 S12
R142 47 S13
R143 47 S14
R144 47 S15
R145 47 S16
R146 47 S17
R147 47 S18
R148 47 S19
R149 47 S20
R150 47 S21
R161 47 S22
R162 47 S23
R163 47 S24
R164 47 S25
R165 47 S26
R166 47 S27
R167 47 S28
R168 47 S29
R169 47 S30
R170 22 S31
COM1
COM2
COM3
COM4
COM5
R181 10k
R182 10k
R183 10k
R184 10k
R185 10k
Q101 2SB1204 DRIVER
Q102 2SB1204 DRIVER
Q103 2SB1204 DRIVER
Q104 2SB1204 DRIVER
Q105 2SB1204 DRIVER
Q106 2SB120 DRIVE
D101 LD-101VR
D106 LD-101VR
D111 LD-101VR
D116 LD-101VR
D121 LD-101VR
D102 HDSP-4830
D107 HDSP-4830
D112 HDSP-4830
D117 HDSP-4830
D122 HDSP-4830
D103 HDSP-4850
D108 HDSP-4850
D113 HDSP-4850
D118 HDSP-4850
D123 HDSP-4850
D104 HDSP-4850
D109 HDSP-4850
D114 HDSP-4850
D119 HDSP-4850
D124 HDSP-4850
S31
S30
S29
S28
S27
S26
S25
S24
S23
S22
S21
S20
S19
S18
S17
S16
S15
S14
S13
S12
S11
S10
S9
S8
S7
S6
S5
S4
S3
S2
S1
3.9
2.9
5
0
2.7
0.16
3.5
3.6
3.8
2.3
2.4
2.5
2.6
2.7
2.8
【METER BOARD】
05

回路図ノート

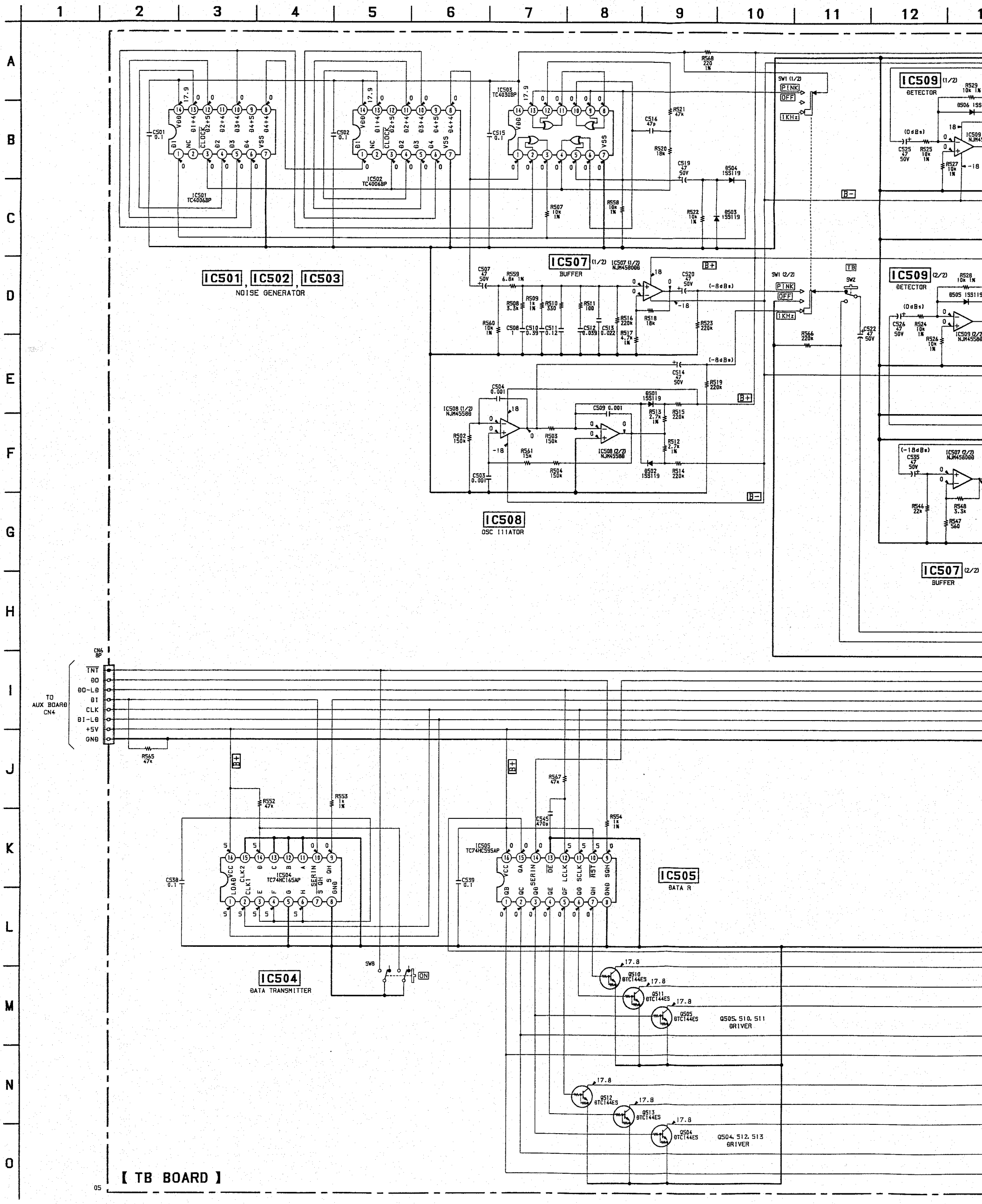
- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは、その耐圧を省略。単位はすべてμF（pはpF)。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- B＋ ：B＋ライン。

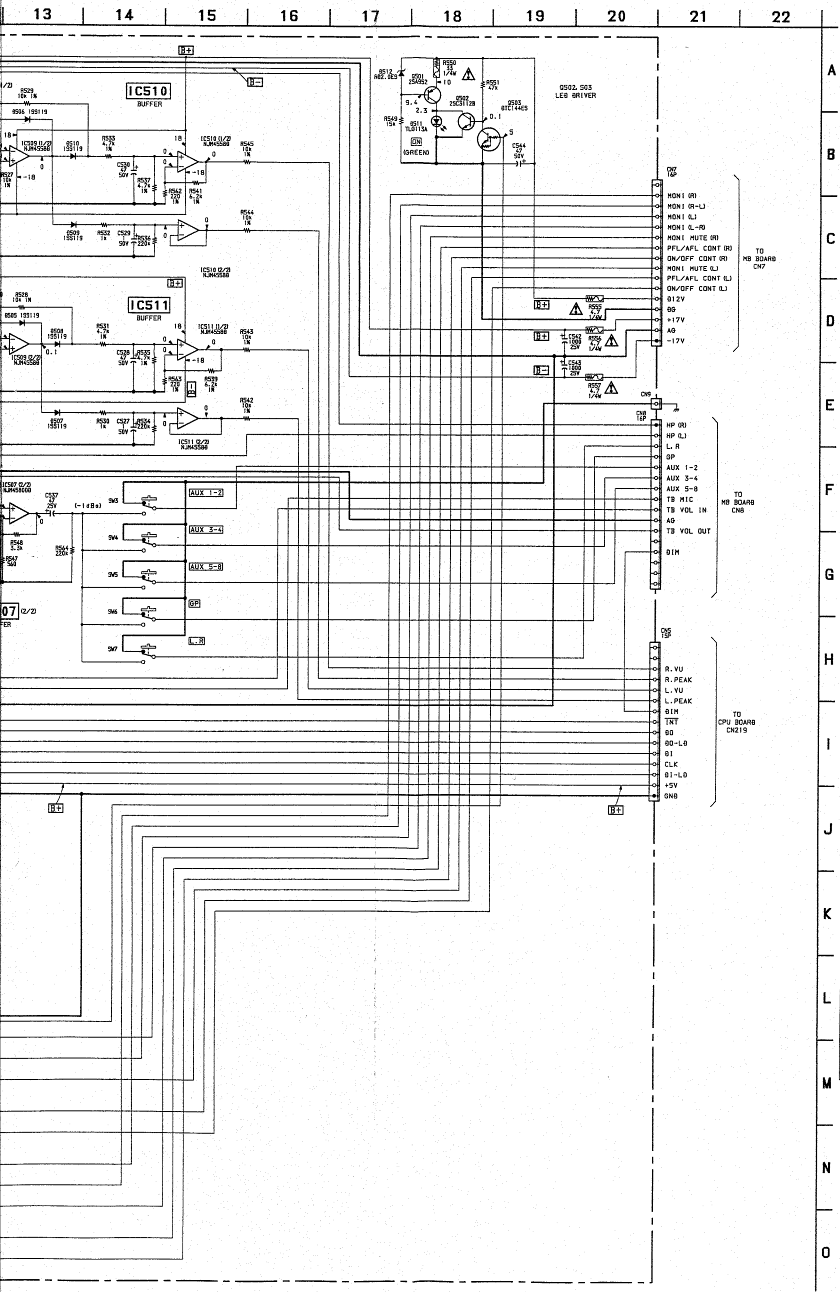


12
13
14
15
16
17
18
19
20
21
22
23
A
B
C
D
E
F
G
H
I
C116 220 10V
C117 220 10V
C118 220 10V
C119 220 10V
C120 220 10V
C121 220 10V
COM5
COM6
COM7
COM8
COM9
COM10
COM11
R185 10k
R186 10k
R187 10k
R188 10k
R189 10k
R190 10k
R191 10k
Q106 2SB1204 DRIVER
Q107 2SB1204 DRIVER
Q108 2SB1204 DRIVER
Q109 2SB1204 DRIVER
Q110 2SB1204 DRIVER
Q111 2SB1204 DRIVER
3.8
2.3
2
3.2
D126 LD-101VR
D131 LD-101VR
D136 LD-101VR
D141 LD-101VR
D148 LD-101VR
S31
D127 HDSP-4830
D132 HDSP-4830
D137 HDSP-4830
D142 HDSP-4830
D149 HDSP-4830
S30
S29
S28
S27
S26
S25
S24
S23
S22
S21
D128 HDSP-4850
D133 HDSP-4850
D138 HDSP-4850
D143 HDSP-4850
D150 HDSP-4850
S20
S19
S18
S17
S16
S15
S14
S13
S12
S11
D129 HDSP-4850
D134 HDSP-4850
D139 HDSP-4850
D144 HDSP-4850
D151 HDSP-4850
S10
S9
S8
S7
S6
S5
S4
S3
S2
S1
D152 5082-7751
D153 5082-7751
D154 5082-7751
COM

3-10. SCHEMATIC DIAGRAM – TB Board –

3-10. 回路図－TB基板－


IC501, IC502, IC503
NOISE GENERATOR
IC501 TC4006BP
IC502 TC4006BP
IC503 TC4030BP
IC507 (1/2) NJM4580DD
BUFFER
IC508 (1/2) NJM4558D
IC508 (2/2) NJM4558D
IC508
OSC ILLATOR
IC509 (1/2)
DETECTOR
IC509 (2/2)
DETECTOR
IC507 (2/2)
BUFFER
SW1 (1/2) PINK OFF 1KHz
SW1 (2/2) PINK OFF 1KHz
TB SW2
(0dBs)
(-8dBs)
(-18dBs)
B+
B-
CN6 8P
TO AUX BOARD CN4
TNT
DO
DO-LD
DI
CLK
DI-LD
+5V
GND
IC504 TC74HC165AP
IC504
DATA TRANSMITTER
SW8 ON
IC505 TC74HC595AP
IC505
DATA R
Q510 DTC144ES
Q511 DTC144ES
Q505 DTC144ES
Q505, 510, 511
DRIVER
Q512 DTC144ES
Q513 DTC144ES
Q504 DTC144ES
Q504, 512, 513
DRIVER
【 TB BOARD 】
05


13
14
15
16
17
18
19
20
21
22
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
B+
B−
IC510
BUFFER
R529 10k 1%
D506 1SS119
IC509 (1/2) NJM4558D
D510 1SS119
R533 4.7k 1%
C530 47 50V
R537 4.7k 1%
R562 220 1%
R541 6.2k 1%
IC510 (1/2) NJM4558D
R545 10k 1%
-18
D509 1SS119
R532 1k
C529 1 50V
R536 220k
R544 10k 1%
IC510 (2/2) NJM4558D
IC511
BUFFER
R528 10k 1%
D505 1SS119
D508 1SS119
IC509 (2/2) NJM4558D
R531 4.7k 1%
C528 47 50V
R535 4.7k 1%
R563 220 1%
R539 6.2k 1%
IC511 (1/2) NJM4558D
R543 10k 1%
D507 1SS119
R530 1k
C527 1 50V
R534 220k
R542 10k 1%
IC511 (2/2) NJM4558D
D512 RD2.0ES
D501 2SA952
R550 33 1/4W
R551 47k
R549 15k
D502 2SC3112B
D503 DTC144ES
D511 TLG113A
ON
(GREEN)
C544 47 50V
Q502, 503 LED DRIVER
9.4
2.3
10
0.1
5
CN7 16P
MONI (R)
MONI (R-L)
MONI (L)
MONI (L-R)
MONI MUTE (R)
PFL/AFL CONT (R)
ON/OFF CONT (R)
MONI MUTE (L)
PFL/AFL CONT (L)
ON/OFF CONT (L)
D12V
DG
+17V
AG
-17V
TO MB BOARD CN7
R555 4.7 1/4W
R556 4.7 1/4W
R557 4.7 1/4W
C542 1000 25V
C543 1000 25V
CN9
CN8 16P
HP (R)
HP (L)
L.R
GP
AUX 1-2
AUX 3-4
AUX 5-8
TB MIC
TB VOL IN
AG
TB VOL OUT
DIM
TO MB BOARD CN8
IC507 (2/2) NJM4580DD
C537 47 25V
(-1dBs)
R548 3.3k
R547 560
R564 220k
SW3
SW4
SW5
SW6
SW7
AUX 1-2
AUX 3-4
AUX 5-8
GP
L.R
07 (2/2)
FER
CN5 15P
R.VU
R.PEAK
L.VU
L.PEAK
DIM
INT
DO
DO-LD
DI
CLK
DI-LD
+5V
GND
TO CPU BOARD CN219

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹⁄₄ W or less unless otherwise specified.
- -ᴡᴠ- : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B- Line.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

回路図ノート

- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは、その耐圧を省略。単位はすべてµF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- -ᴡᴠ- ：ヒューズ抵抗。
- ▭ ：パネル表示名称。
- B+ ：B＋ライン。
- B− ：B－ライン。

⚠印の部品，または⚠印付きの点線で囲まれた部品は、安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

3-11. PRINTED WIRING BOARD – TB Board –

3-11. プリント図ー TB 基板ー

• TB BOARD Location

Ref. No.	Location	Ref. No.	Location
CN5	A-11	IC502	B-8
CN6	E-2	IC503	B-6
CN7	F-8	IC504	D-3
CN8	F-9	IC505	D-5
		IC507	C-3
D501	B-5	IC508	B-5
D502	B-5	IC509	D-10
D503	C-7	IC510	D-11
D504	C-7	IC511	B-11
D505	D-10		
D506	D-10	Q501	C-2
D507	B-11	Q502	C-1
D508	C-11	Q503	C-1
D509	C-11	Q504	E-5
D510	D-11	Q505	D-6
D511	A-1	Q510	E-5
D512	C-2	Q511	E-5
		Q512	E-5
IC501	B-9	Q513	E-5

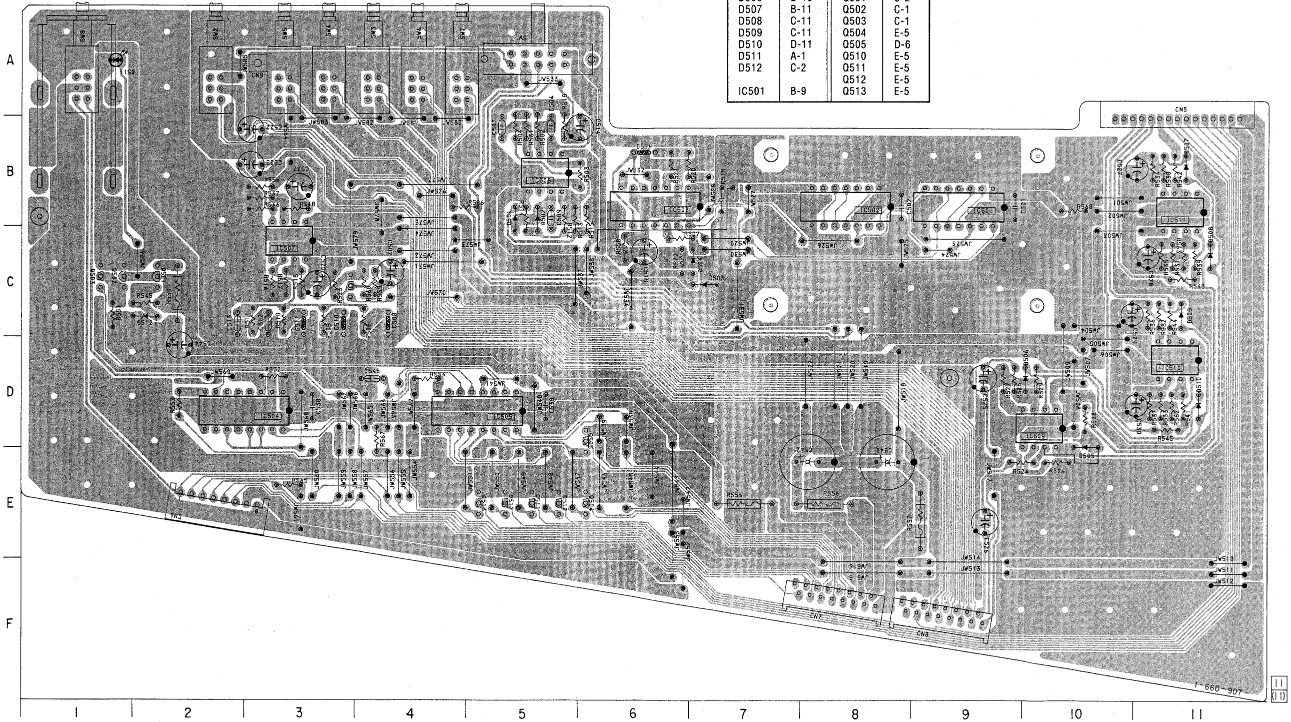
Note on Printed Wiring Board:

- o—— : parts extracted from the component side.
- ▒ : Pattern from the side which enables seeing.

プリント図ノート

- o—— : 部品面側取付のリード線。
- ▒ : 見ている面側のパターン。

【TB BOARD】

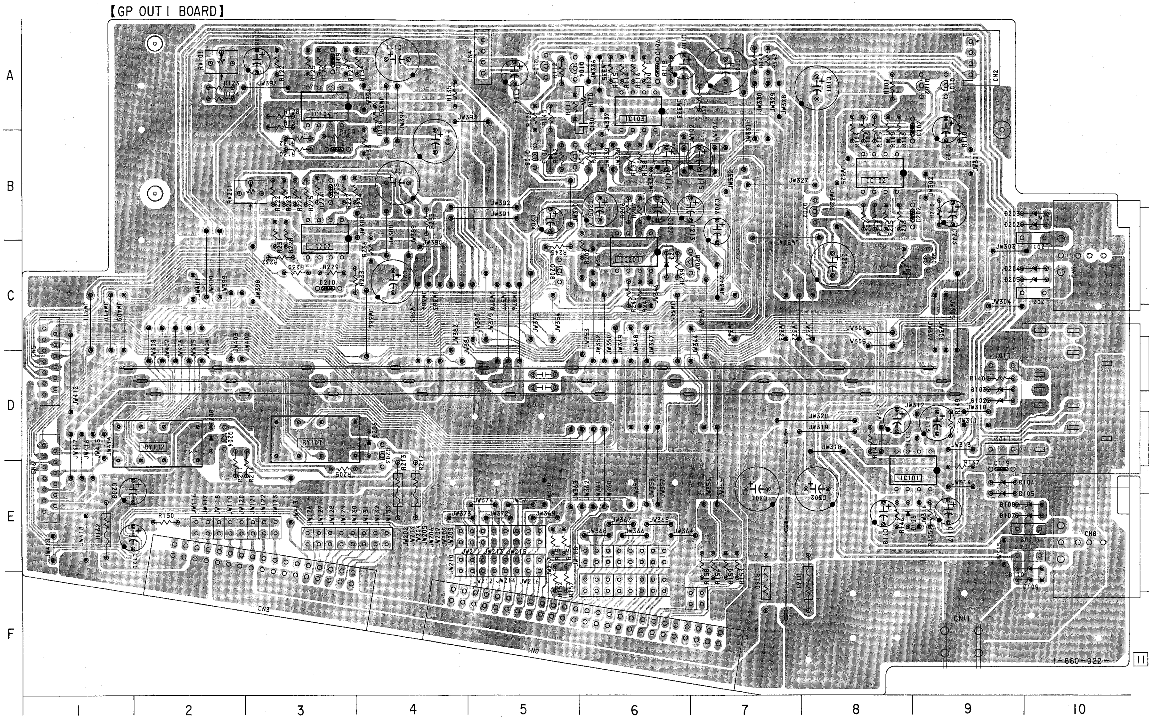

A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
11
CN5
CN6
CN7
CN8
CN9
IC501
IC502
IC503
IC504
IC505
IC507
IC508
IC509
IC510
IC511
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
D511
R555
R556
R557
R545
R524
R526
R568
R507
R565
D505
JW510
JW511
JW512
JW513
JW514
JW515
JW516
JW533
JW541
JW569
JW570
JW571
JW572
JW573
JW574
JW575
JW580
JW581
JW582
JW583
C545
C542
C543
1-660-907-
11
(11)

3-12. PRINTED WIRING BOARD – GP-OUT1 Board –

3-12. プリント図ー GP-OUT1 基板ー

- **GP-OUT1 BOARD Location**

Ref. No.	Location
CN1	F-5
CN2	A-9
CN3	F-3
CN4	A-5
CN5	D-1
CN6	E-1
CN8	E-10
CN9	C-10
CN10	B-10
CN11	F-9
D101	B-5
D102	D-9
D103	D-9
D104	E-9
D105	E-9
D106	E-8
D107	E-10
D108	E-10
D109	F-10
D110	E-10
D201	C-6
D202	B-10
D203	B-10
D204	C-10
D205	C-10
D206	D-4
D208	D-2
IC101	E-9
IC102	B-8
IC103	A-6
IC104	A-3
IC201	C-6
IC202	B-3
Q101	A-9
Q102	A-9
Q104	A-5
Q105	A-5
Q107	B-5
Q108	B-5
Q201	C-9
Q202	B-8
Q203	D-4
Q204	D-2
Q207	C-7
Q208	C-5


【GP OUT1 BOARD】
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
CN1
CN2
CN3
CN4
CN5
CN6
CN8
CN9
CN10
CN11
IC101
IC102
IC103
IC104
IC201
IC202
RY101
RY102
RV101
RV201
1-660-922-11

Note on Printed Wiring Board:

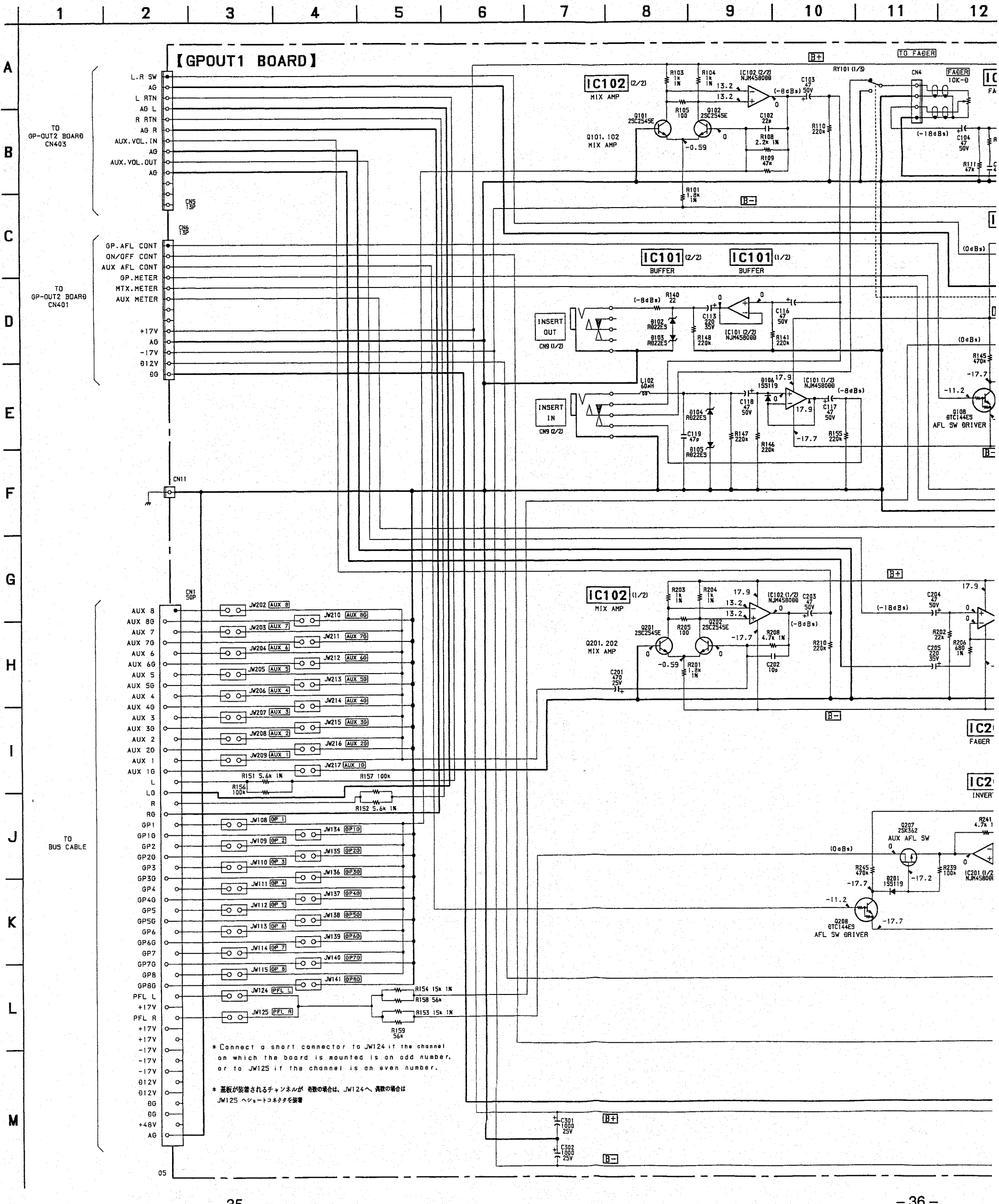
- ○—— : parts extracted from the component side.
- ▒ : Pattern from the side which enables seeing.

プリント図ノート

- ○——：部品面側取付のリード線。
- ▒：見ている面側のパターン。

3-13. SCHEMATIC DIAGRAM – GP-OUT1 Board –

3-13. 回路図－GP-OUT1 基板－



1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
【GPOUT1 BOARD】
TO GP-OUT2 BOARD CN403
L.R SW
AG
L RTN
AG L
R RTN
AG R
AUX.VOL.IN
AG
AUX.VOL.OUT
AG
CN5 13P
CN6 13P
TO GP-OUT2 BOARD CN401
GP.AFL CONT
ON/OFF CONT
AUX AFL CONT
GP.METER
MTX.METER
AUX METER
+17V
AG
-17V
D12V
DG
CN11
CN1 50P
TO BUS CABLE
AUX 8
AUX 8G
AUX 7
AUX 7G
AUX 6
AUX 6G
AUX 5
AUX 5G
AUX 4
AUX 4G
AUX 3
AUX 3G
AUX 2
AUX 2G
AUX 1
AUX 1G
L
LG
R
RG
GP1
GP1G
GP2
GP2G
GP3
GP3G
GP4
GP4G
GP5
GP5G
GP6
GP6G
GP7
GP7G
GP8
GP8G
PFL L
+17V
PFL R
+17V
+17V
-17V
-17V
-17V
D12V
D12V
DG
DG
+48V
AG
05
JW202 AUX 8
JW203 AUX 7
JW204 AUX 6
JW205 AUX 5
JW206 AUX 4
JW207 AUX 3
JW208 AUX 2
JW209 AUX 1
JW210 AUX 8G
JW211 AUX 7G
JW212 AUX 6G
JW213 AUX 5G
JW214 AUX 4G
JW215 AUX 3G
JW216 AUX 2G
JW217 AUX 1G
R151 5.6k 1%
R156 100k
R157 100k
R152 5.6k 1%
JW108 GP 1
JW109 GP 2
JW110 GP 3
JW111 GP 4
JW112 GP 5
JW113 GP 6
JW114 GP 7
JW115 GP 8
JW134 GP1G
JW135 GP2G
JW136 GP3G
JW137 GP4G
JW138 GP5G
JW139 GP6G
JW140 GP7G
JW141 GP8G
JW124 PFL L
JW125 PFL R
R154 15k 1%
R158 56k
R153 15k 1%
R159 56k
* Connect a short connector to JW124 if the channel on which the board is mounted is an odd number, or to JW125 if the channel is an even number.
＊ 基板が装着されるチャンネルが 奇数の場合は、JW124へ 偶数の場合は JW125 へショートコネクタを装着
IC102 (2/2)
MIX AMP
R103 1k 1%
R104 1k 1%
IC102 (2/2) NJM4580DD
13.2
13.2
(-8dBs)
C103 47 50V
0
R105 100
Q102 2SC2545E
Q101 2SC2545E
C102 22p
R108 2.2k 1%
R109 47k
R110 220k
0
-0.59
Q101, 102 MIX AMP
R101 1.8k 1%
B+
B-
RY101 (1/3)
TO FADER
CN4
FADER 10K-B
(-18dBs)
C104 47 50V
R111 47k
IC101 (2/2)
BUFFER
IC101 (1/2)
BUFFER
(-8dBs)
R140 22
0
0
C113 220 35V
D102 RD22ES
D103 RD22ES
IC101 (2/2) NJM4580DD
C116 47 50V
R148 220k
R141 220k
INSERT OUT
CN9 (1/2)
L102 60μH
INSERT IN
CN9 (2/2)
D106 1SS119
17.9
IC101 (1/2) NJM4580DD
(-8dBs)
C118 47 50V
D104 RD22ES
17.9
C117 47 50V
C119 47p
R147 220k
R146 220k
-17.7
R155 220k
D105 RD22ES
(0dBs)
(0dBs)
R145 470k
-17.7
-11.2
Q108 DTC144ES
AFL SW DRIVER
IC102 (1/2)
MIX AMP
R203 1k 1%
R204 1k 1%
17.9
13.2
13.2
IC102 (1/2) NJM4580DD
C203 47 50V
0
(-8dBs)
Q201 2SC2545E
R205 100
Q202 2SC2545E
-17.7
R208 4.7k 1%
R210 220k
Q201, 202 MIX AMP
0
-0.59
R201 1.8k 1%
0
C202 10p
C201 470 25V
B+
B-
(-18dBs)
C204 47 50V
17.9
0
0
R202 22k
R206 680 1%
C205 220 35V
IC2
FADER
IC2
INVER
Q207 2SK362
AUX AFL SW
0
R241 4.7k 1
IC201 (1/2 NJM4580D
(0dBs)
R245 470k
-17.7
D201 1SS119
-17.2
R239 100k
-11.2
Q208 DTC144ES
AFL SW DRIVER
-17.7
C301 1000 25V
B+
C302 1000 25V
B-

Note on Schematic Diagram:

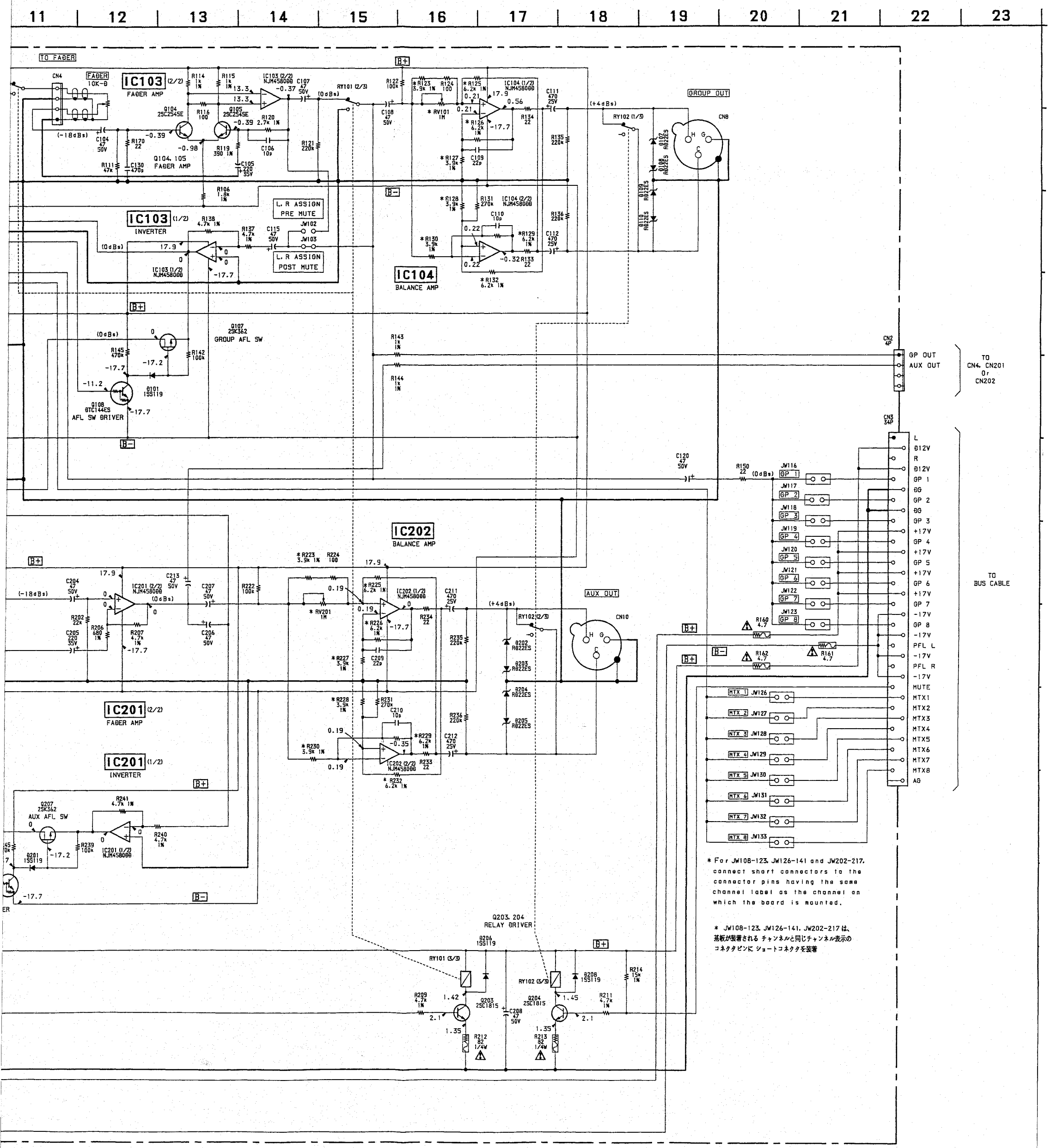
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⊣∿⊢ : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B- Line.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

回路図ノート

- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは，その耐圧を省略。単位はすべてµF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- ⊣∿⊢：ヒューズ抵抗。
- ▭：パネル表示名称。
- B+：B＋ライン。
- B−：B－ライン。

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

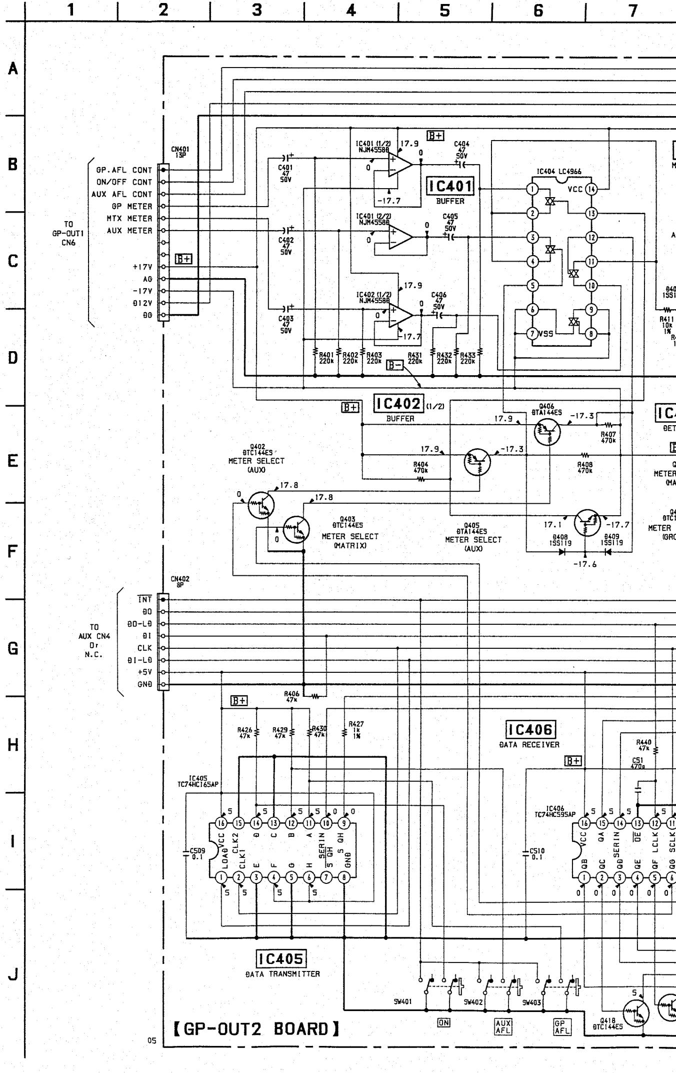

11
12
13
14
15
16
17
18
19
20
21
22
23
TO FADER
CN4
FADER 10K-B
IC103 (2/2)
FADER AMP
Q104 2SC2545E
Q105 2SC2545E
Q104, 105 FADER AMP
IC103 (2/2) NJM4580D
RY101 (2/3)
(0dBs)
(-18dBs)
B+
B−
IC104 (1/2) NJM4580D
IC104 (2/2) NJM4580D
IC104
BALANCE AMP
RV101 1M
(+4dBs)
RY102 (1/3)
GROUP OUT
CN8
D107 RD22ES
D108 RD22ES
D109 RD22ES
D110 RD22ES
L, R ASSIGN PRE MUTE
L, R ASSIGN POST MUTE
JW102
JW103
IC103 (1/2)
INVERTER
IC103 (1/2) NJM4580D
Q107 2SK362
GROUP AFL SW
Q108 DTC144ES
AFL SW DRIVER
D101 1SS119
R143 1k 1%
R144 1k 1%
CN2 4P
GP OUT
AUX OUT
TO CN4, CN201 Or CN202
CN3 34P
L
D12V
R
D12V
GP 1
DG
GP 2
DG
GP 3
+17V
GP 4
+17V
GP 5
+17V
GP 6
+17V
GP 7
-17V
GP 8
-17V
PFL L
-17V
PFL R
-17V
MUTE
MTX1
MTX2
MTX3
MTX4
MTX5
MTX6
MTX7
MTX8
AG
TO BUS CABLE
C120 47 50V
R150 22
JW116 GP 1
JW117 GP 2
JW118 GP 3
JW119 GP 4
JW120 GP 5
JW121 GP 6
JW122 GP 7
JW123 GP 8
R160 4.7
R162 4.7
R161 4.7
MTX 1 JW126
MTX 2 JW127
MTX 3 JW128
MTX 4 JW129
MTX 5 JW130
MTX 6 JW131
MTX 7 JW132
MTX 8 JW133
IC202
BALANCE AMP
IC202 (1/2) NJM4580D
IC202 (2/2) NJM4580D
RV201 1M
IC201 (2/2) NJM4580D
IC201 (2/2)
FADER AMP
IC201 (1/2)
INVERTER
IC201 (1/2) NJM4580D
AUX OUT
CN10
RY102 (2/3)
D202 RD22ES
D203 RD22ES
D204 RD22ES
D205 RD22ES
Q207 2SK362
AUX AFL SW
D201 1SS119
Q203, 204
RELAY DRIVER
D206 1SS119
D208 1SS119
RY101 (3/3)
RY102 (3/3)
Q203 2SC1815
Q204 2SC1815
R212 82 1/4W
R213 82 1/4W
R214 15k 1%
C208 47 50V
17.9
-17.7
13.3
-0.37
-0.39
-0.98
0.21
0.56
0.22
-0.32
0.19
-0.35
1.42
1.45
2.1
1.35
-11.2
-17.2

* For JW108-123, JW126-141 and JW202-217, connect short connectors to the connector pins having the same channel label as the channel on which the board is mounted.

* JW108-123, JW126-141, JW202-217は、基板が装着されるチャンネルと同じチャンネル表示のコネクタピンにショートコネクタを装着

3-14. SCHEMATIC DIAGRAM – GP-OUT2 Board –

3-14. 回路図－GP-OUT2 基板－


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
CN401
13P
GP.AFL CONT
ON/OFF CONT
AUX AFL CONT
GP METER
MTX METER
AUX METER
+17V
AG
-17V
Ð12V
ÐG
TO
GP-OUT1
CN6
B+
IC401 (1/2)
NJM4558Ð
17.9
0
-17.7
C401
47
50V
C404
47
50V
IC401
BUFFER
IC401 (2/2)
NJM4558Ð
C402
47
50V
C405
47
50V
IC402 (1/2)
NJM4558Ð
C403
47
50V
C406
47
50V
R401
220k
R402
220k
R403
220k
R431
220k
R432
220k
R433
220k
B-
IC402 (1/2)
BUFFER
IC404 LC4966
VCC
VSS
Q406
ÐTA144ES
-17.3
R407
470k
R408
470k
Q402
ÐTC144ES
METER SELECT
(AUX)
R404
470k
17.8
Q403
ÐTC144ES
METER SELECT
(MATRIX)
Q405
ÐTA144ES
METER SELECT
(AUX)
17.1
Ð408
1SS119
Ð409
1SS119
-17.6
R411
10k
1%
CN402
8P
INT
ÐO
ÐO-LÐ
ÐI
CLK
ÐI-LÐ
+5V
GNÐ
TO
AUX CN4
Or
N.C.
R406
47k
R426
47k
R429
47k
R430
47k
R427
1k
1%
IC405
TC74HC165AP
VCC
CLK2
D
C
B
A
SERIN
S QH
LOAÐ
CLK1
E
F
G
H
S QH
GNÐ
C509
0.1
IC405
ÐATA TRANSMITTER
IC406
ÐATA RECEIVER
IC406
TC74HC595AP
QA
SERIN
OE
LCLK
SCLK
QB
QC
QÐ
QE
QF
QG
C510
0.1
R440
47k
C51
470p
SW401
SW402
SW403
ON
AUX AFL
GP AFL
Q418
ÐTC144ES
METER
【GP-OUT2 BOARD】
05

Note on Schematic Diagram:

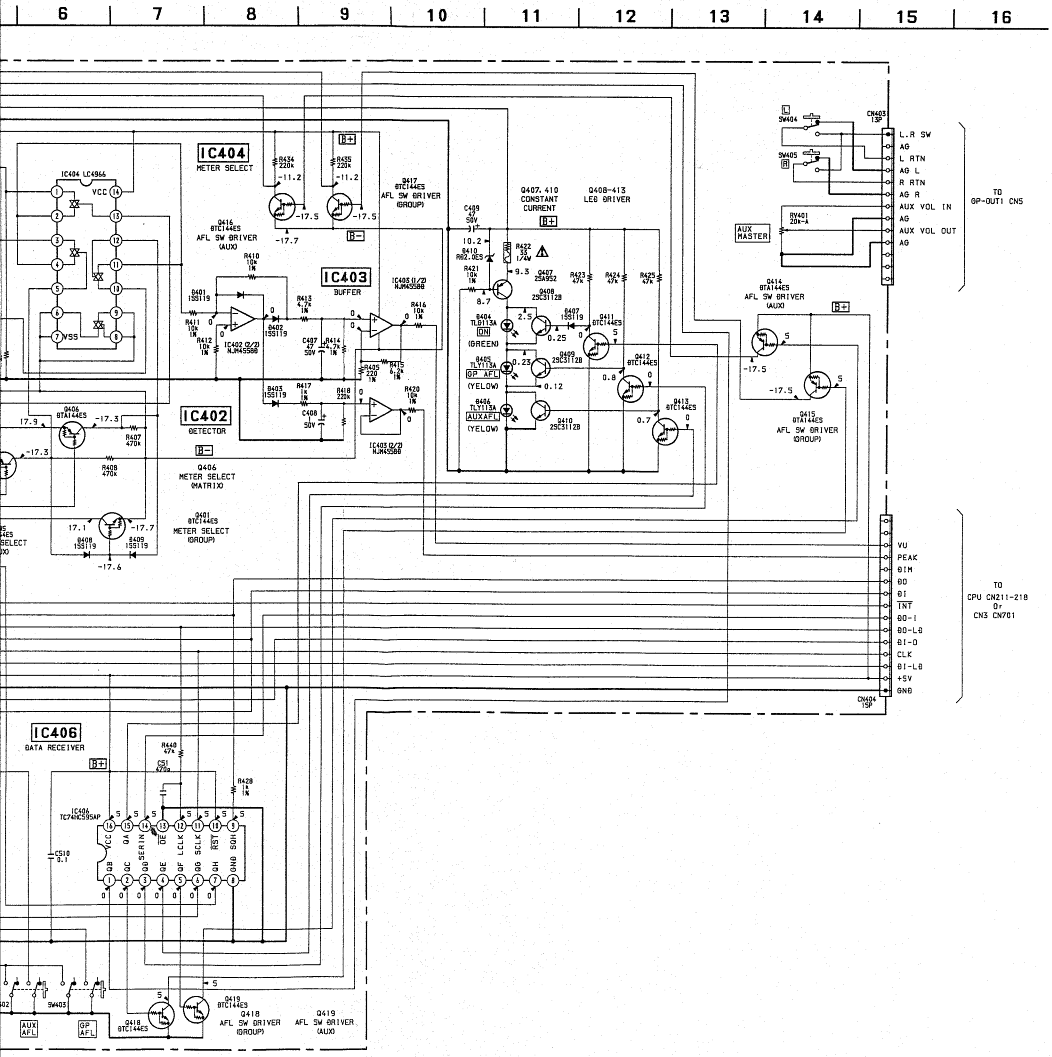
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⏛ : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B– : B- Line.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

回路図ノート

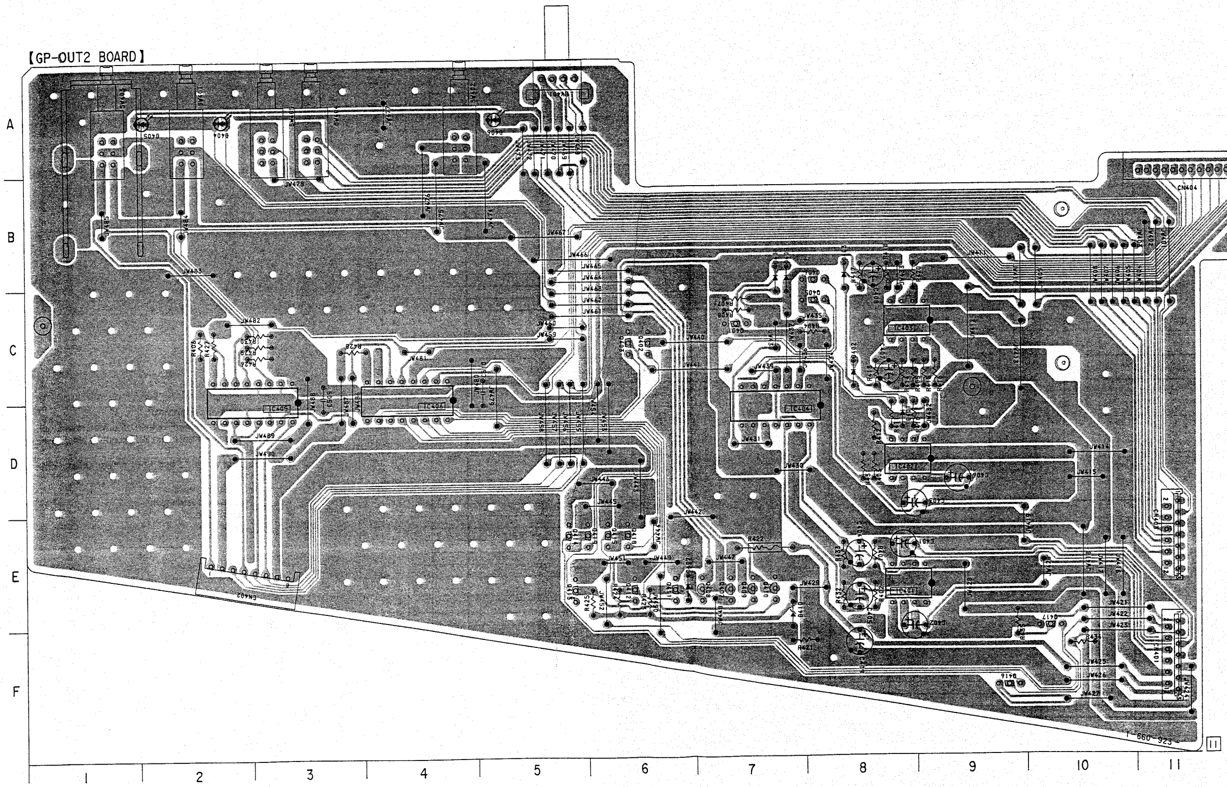
- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは、その耐圧を省略。単位はすべてμF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- ⏛ ：ヒューズ抵抗。
- ▭ ：パネル表示名称。
- B+ ：B＋ライン。
- B– ：B－ライン。

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。


6
7
8
9
10
11
12
13
14
15
16
IC404
METER SELECT
IC404 LC4966
VCC
VSS
R434 220k
R435 220k
-11.2
-11.2
-17.5
-17.5
-17.7
Q416 BTC144ES
AFL SW DRIVER (AUX)
Q417 BTC144ES
AFL SW DRIVER (GROUP)
B+
B-
IC403
BUFFER
IC403 (1/2) NJM4558D
R410 10k 1%
D401 1SS119
R411 10k 1%
R412 10k 1%
IC402 (2/2) NJM4558D
D402 1SS119
R413 4.7k 1%
R416 10k 1%
C407 47 50V
R414 4.7k 1%
R405 220 1%
R415 6.2k 1%
D403 1SS119
R417 1k 1%
R418 220k
R420 10k 1%
C408 1 50V
IC403 (2/2) NJM4558D
IC402
DETECTOR
Q406 BTA144ES
17.9
-17.3
-17.3
R407 470k
R408 470k
Q406
METER SELECT (MATRIX)
Q401 BTC144ES
METER SELECT (GROUP)
17.1
-17.7
D408 1SS119
D409 1SS119
-17.6
SELECT
C409 47 50V
10.2
D410 RD2.0ES
R421 10k 1%
R422 33 1/4W
9.3
8.7
Q407, 410
CONSTANT CURRENT
Q408-413
LED DRIVER
Q407 2SA952
Q408 2SC3112B
R423 47k
R424 47k
R425 47k
D404 TLG113A
ON
(GREEN)
D405 TLY113A
GP AFL
(YELLOW)
D406 TLY113A
AUXAFL
(YELLOW)
2.5
0.25
0.23
0.12
D407 1SS119
Q411 BTC144ES
Q409 2SC3112B
Q412 BTC144ES
Q410 2SC3112B
Q413 BTC144ES
0.8
0.7
AUX MASTER
RV401 20k-A
L
SW404
SW405
R
CN403 13P
L.R SW
AG
L RTN
AG L
R RTN
AG R
AUX VOL IN
AG
AUX VOL OUT
AG
TO GP-OUT1 CN5
Q414 BTA144ES
AFL SW DRIVER (AUX)
-17.5
-17.5
Q415 BTA144ES
AFL SW DRIVER (GROUP)
VU
PEAK
DIM
DO
DI
INT
DO-I
DO-LD
DI-O
CLK
DI-LD
+5V
GND
CN404 15P
TO CPU CN211-218 Or CN3 CN701
IC406
DATA RECEIVER
R440 47k
C51 470p
R428 1k 1%
IC406 TC74HC595AP
VCC
QA
SERIN
OE
LCLK
SCLK
RST
SQH
QB
QC
QD
QE
QF
QG
QH
GND
C510 0.1
SW403
AUX AFL
GP AFL
Q418 BTC144ES
Q419 BTC144ES
Q418
AFL SW DRIVER (GROUP)
Q419
AFL SW DRIVER (AUX)

3-15. PRINTED WIRING BOARD – GP-OUT2 Board –

3-15. プリント図ー GP-OUT2 基板ー


【GP-OUT2 BOARD】
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
11
CN401
CN402
CN403
CN404
IC401
IC402
IC403
IC404
IC405
IC406
R422
JW467
JW466
JW465
JW464
JW463
JW462
JW461
JW460
JW459
JW483
JW482
JW481
JW489
JW490
JW478
JW440
JW441
JW442
JW435
JW436
JW431
JW430
JW414
JW415
JW421
JW422
JW423
JW425
JW426
JW427
1-660-923-
11

• GP-

Ref. N
CN40
CN40
CN40
CN40
D401
D402
D403
D404
D405
D406
D407
D408
D409
D410
IC40
IC40
IC40
IC40
IC40

Note or

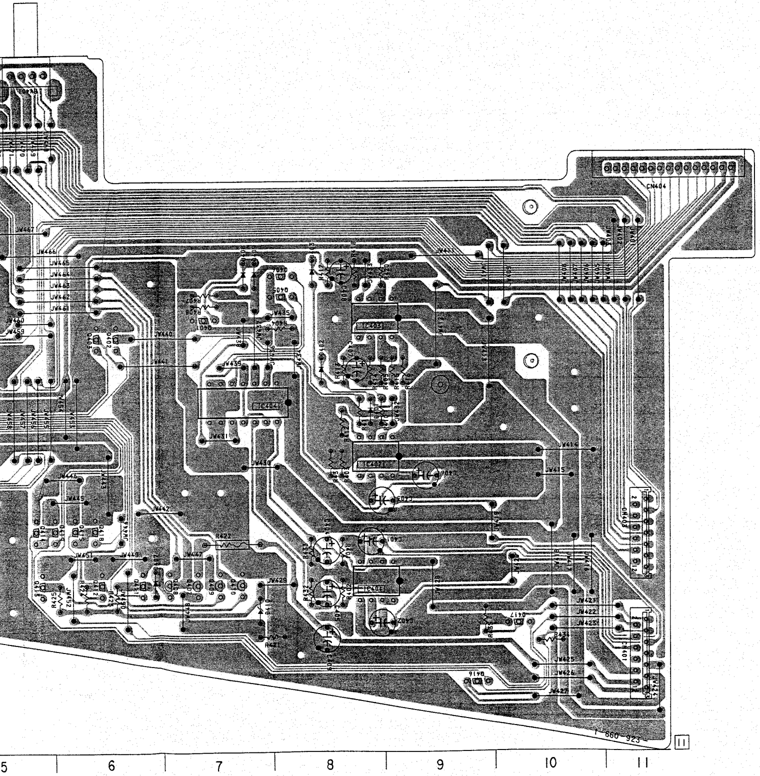
• ○—

• ▨

プリン

• ○—

• ▨


CN404
CN403
CN401
IC401
IC402
IC403
IC404
JW467
JW466
JW465
JW464
JW463
JW462
JW461
JW460
JW459
JW440
JW441
JW439
JW435
JW431
JW430
JW442
JW445
JW446
JW451
JW449
JW447
JW429
JW414
JW415
JW421
JW422
JW423
JW425
JW426
JW427
R422
R421
R424
R425
Q416
Q417
1-660-923-
11
5
6
7
8
9
10
11

- **GP-OUT2 BOARD Location**

Ref. No.	Location	Ref. No.	Location
CN401	F-11	IC406	C-4
CN402	E-2		
CN403	E-11	Q401	C-7
CN404	A-11	Q402	C-6
		Q403	C-6
D401	D-8	Q405	C-8
D402	C-8	Q406	B-8
D403	B-8	Q407	E-7
D404	A-2	Q408	E-7
D405	A-2	Q409	E-7
D406	A-5	Q410	E-7
D407	E-6	Q411	E-6
D408	B-7	Q412	E-6
D409	B-7	Q413	E-5
D410	E-7	Q414	E-5
		Q415	E-6
IC401	E-8	Q416	F-9
IC402	D-8	Q417	F-10
IC403	C-8	Q418	E-6
IC404	D-7	Q419	E-6
IC405	C-3		

Note on Printed Wiring Board:

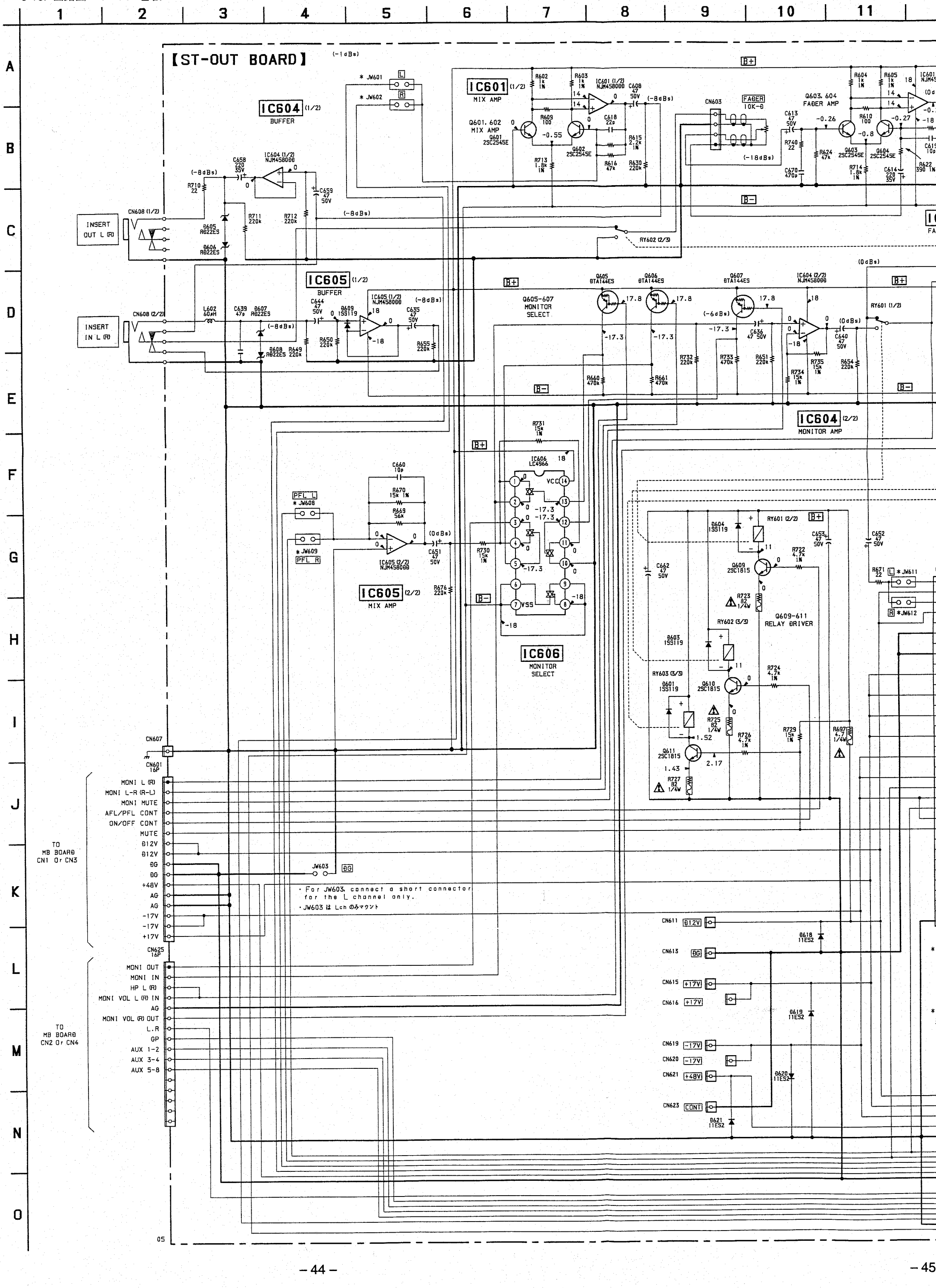
- o—— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

プリント図ノート

- o—— ：部品面側取付のリード線。
- ▨ ：見ている面側のパターン。

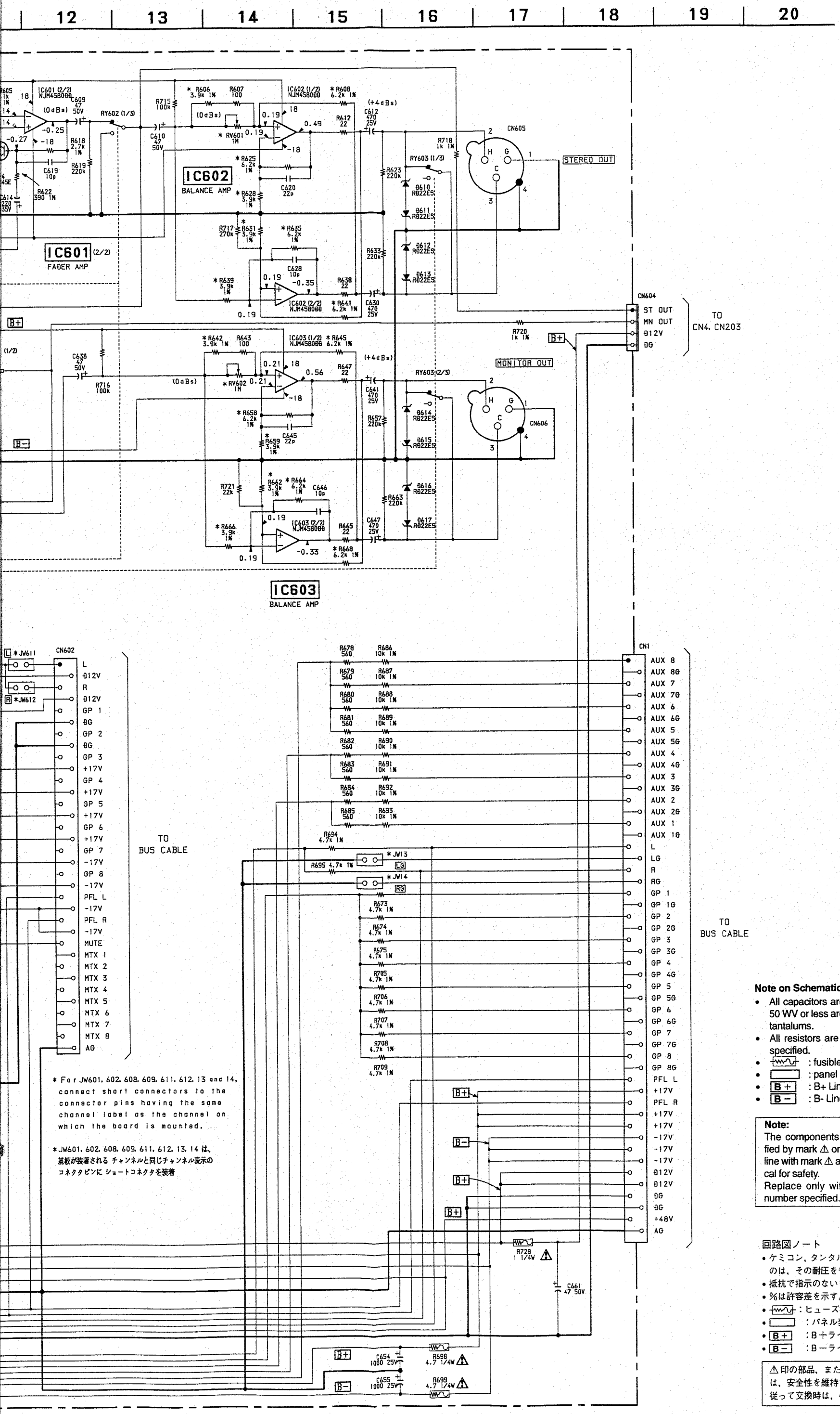
3-16. SCHEMATIC DIAGRAM – ST-OUT Board –

3-16. 回路図ー ST-OUT 基板ー



【ST-OUT BOARD】
IC601 (1/2) MIX AMP
IC601 (1/2) NJM4580BD
Q601, 602 MIX AMP
Q601 2SC2545E
Q602 2SC2545E
IC604 (1/2) BUFFER
IC604 (1/2) NJM4580BD
IC605 (1/2) BUFFER
IC605 (1/2) NJM4580BD
IC605 (2/2) MIX AMP
IC605 (2/2) NJM4580BD
IC604 (2/2) MONITOR AMP
IC604 (2/2) NJM4580BD
IC606 MONITOR SELECT
IC606 LC4966
Q605-607 MONITOR SELECT
Q605 DTA144ES
Q606 DTA144ES
Q607 DTA144ES
Q603, 604 FADER AMP
Q603 2SC2545E
Q604 2SC2545E
Q609-611 RELAY DRIVER
Q609 2SC1815
Q610 2SC1815
Q611 2SC1815
CN603
FADER 10K-D
RY601 (1/2)
RY601 (2/2)
RY602 (2/3)
RY602 (3/3)
RY603 (3/3)
INSERT OUT L (R)
INSERT IN L (R)
CN608 (1/2)
CN608 (2/2)
PFL L
PFL R
*JW601
*JW602
*JW608
*JW609
*JW611
*JW612
JW603 DG
CN607
CN601 16P
MONI L (R)
MONI L-R (R-L)
MONI MUTE
AFL/PFL CONT
ON/OFF CONT
MUTE
D12V
D12V
DG
DG
+48V
AG
AG
-17V
-17V
+17V
TO MB BOARD CN1 Or CN3
CN625 16P
MONI OUT
MONI IN
HP L (R)
MONI VOL L (R) IN
AG
MONI VOL (R) OUT
L.R
GP
AUX 1-2
AUX 3-4
AUX 5-8
TO MB BOARD CN2 Or CN4
CN611 D12V
CN613 DG
CN615 +17V
CN616 +17V
CN619 -17V
CN620 -17V
CN621 +48V
CN623 CONT
D618 11ES2
D619 11ES2
D620 11ES2
D621 11ES2
D601 1SS119
D603 1SS119
D604 1SS119
D605 RD22ES
D606 RD22ES
D607 RD22ES
D608 RD22ES
D609 1SS119
L602 60μH
B+
B-
(-1dBs)
(-8dBs)
(-18dBs)
(-6dBs)
(0dBs)
17.8
-17.3
-18
18
05

· For JW603, connect a short connector for the L channel only.
· JW603 は Lch のみマウント


12
13
14
15
16
17
18
19
20
IC601 (2/2) FADER AMP
IC602 BALANCE AMP
IC603 BALANCE AMP
IC602 (1/2) NJM4580DD
IC602 (2/2) NJM4580DD
IC603 (1/2) NJM4580DD
IC603 (2/2) NJM4580DD
RY602 (1/3)
RY603 (1/3)
RY603 (2/3)
(0dBs)
(+4dBs)
CN605
STEREO OUT
CN606
MONITOR OUT
CN604
ST OUT
MN OUT
Ø12V
ØG
TO CN4, CN203
B+
B-
CN602
L
Ø12V
R
Ø12V
GP 1
ØG
GP 2
ØG
GP 3
+17V
GP 4
+17V
GP 5
+17V
GP 6
+17V
GP 7
-17V
GP 8
-17V
PFL L
-17V
PFL R
-17V
MUTE
MTX 1
MTX 2
MTX 3
MTX 4
MTX 5
MTX 6
MTX 7
MTX 8
AG
TO BUS CABLE
*JW611
*JW612
*JW13
*JW14
LG
RG
CN1
AUX 8
AUX 8G
AUX 7
AUX 7G
AUX 6
AUX 6G
AUX 5
AUX 5G
AUX 4
AUX 4G
AUX 3
AUX 3G
AUX 2
AUX 2G
AUX 1
AUX 1G
L
LG
R
RG
GP 1
GP 1G
GP 2
GP 2G
GP 3
GP 3G
GP 4
GP 4G
GP 5
GP 5G
GP 6
GP 6G
GP 7
GP 7G
GP 8
GP 8G
PFL L
+17V
PFL R
+17V
+17V
-17V
-17V
-17V
Ø12V
Ø12V
ØG
ØG
+48V
AG
TO BUS CABLE
R728 1 1/4W
C661 47 50V
C654 1000 25V
C655 1000 25V
R698 4.7 1/4W
R699 4.7 1/4W

* For JW601, 602, 608, 609, 611, 612, 13 and 14, connect short connectors to the connector pins having the same channel label as the channel on which the board is mounted.

*JW601, 602, 608, 609, 611, 612, 13, 14 は、基板が装着される チャンネルと同じチャンネル表示のコネクタピンに ショートコネクタを装着

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▭ : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B- Line.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

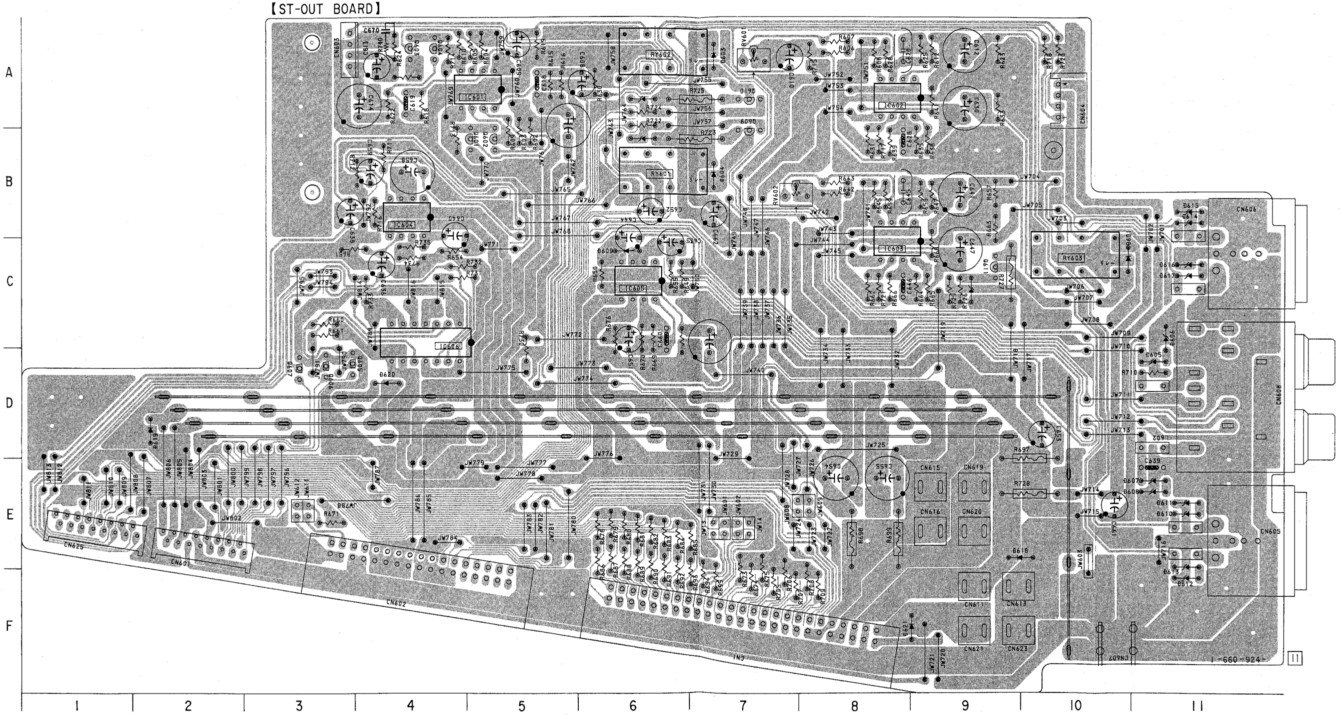
回路図ノート

- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは、その耐圧を省略。単位はすべてµF（pはpF)。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- ▭：ヒューズ抵抗。
- ▭ ：パネル表示名称。
- B+ ：B＋ライン。
- B− ：B－ライン。

⚠印の部品、または⚠印付きの点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

3-17. PRINTED WIRING BOARD – ST-OUT Board –

3-17. プリント図ー ST-OUT 基板ー


【ST-OUT BOARD】
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
11
IC601
IC602
IC603
IC604
IC605
IC606
RY601
RY602
RY603
CN601
CN602
CN603
CN604
CN605
CN606
CN607
CN608
CN611
CN613
CN615
CN616
CN619
CN620
CN621
CN623
CN625
CN1
1-660-924-
11

• ST-OU

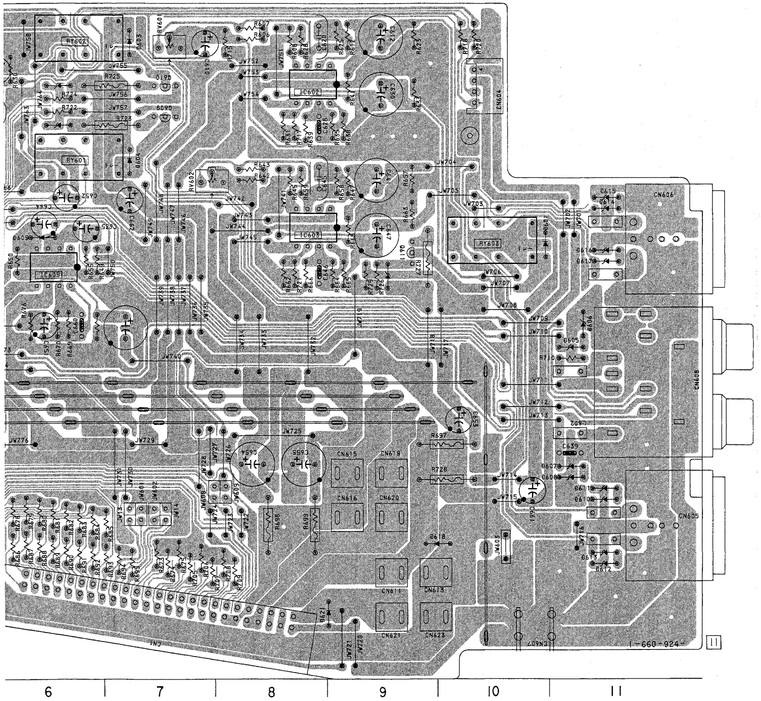
Ref. No
CN1
CN601
CN602
CN603
CN604
CN605
CN606
CN607
CN608
CN611
CN613
CN615
CN616
CN619
CN620
CN621
CN623
CN625
D601
D603
D604
D605
D606
D607
D608
D609
D610
D611

Note on P

- ○——
- ▒

プリント図

- ○—— :
- ▒ :


RY602
RY601
RY603
IC602
IC603
IC605
CN604
CN606
CN608
CN605
CN615
CN619
CN616
CN620
CN611
CN613
CN621
CN623
CN607
CN1
1-660-924-
11
6
7
8
9
10
11

• ST-OUT BOARD Location

Ref. No.	Location	Ref. No.	Location
CN1	F-7	D612	F-11
CN601	E-2	D613	E-11
CN602	F-4	D614	B-11
CN603	A-3	D615	B-11
CN604	A-10	D616	C-11
CN605	E-11	D617	C-11
CN606	C-11	D618	E-10
CN607	F-10	D619	D-2
CN608	D-11	D620	D-4
CN611	F-9	D621	F-9
CN613	F-9		
CN615	E-9	IC601	A-5
CN616	E-9	IC602	A-8
CN619	E-9	IC603	C-8
CN620	E-9	IC604	B-4
CN621	F-9	IC605	C-6
CN623	F-9	IC606	C-4
CN625	E-1		
		Q601	B-5
D601	C-10	Q602	B-5
D603	A-7	Q603	A-4
D604	B-7	Q604	A-4
D605	D-11	Q605	D-3
D606	C-11	Q606	D-3
D607	E-11	Q607	D-3
D608	E-11	Q609	B-7
D609	C-6	Q610	A-7
D610	E-11	Q611	C-9
D611	E-11		

Note on Printed Wiring Board:

- o—— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

プリント図ノート

- o——：部品面側取付のリード線。
- ▨：見ている面側のパターン。

- **MTX-OUT1 BOARD Location**

Ref. No.	Location	Ref. No.	Location
CN601	G-12	IC601	B-11
CN602	D-13	IC602	B-10
CN603	G-5	IC603	B-8
CN605	C-1	IC604	B-7
CN606	E-13	IC605	B-6
CN608	F-13	IC606	B-4
CN609	E-1	IC607	D-7
CN610	A-12	IC608	F-9
		IC609	C-3
D601	D-3		
D602	D-3	Q601	D-7
D603	D-2	Q602	D-6
D604	A-1	Q604	C-3
D605	A-3	Q605	C-2
D606	A-2	Q606	D-2
D607	D-3	Q607	D-2
D608	D-4	Q608	C-1
D609	C-4	Q609	C-2
D610	C-9	Q610	C-1
D611	D-12	Q611	A-3
D612	D-12	Q612	B-1
D613	C-12	Q613	A-2
D614	C-12	Q614	A-1
D621	E-12	Q615	C-10
D622	E-12	Q616	C-9
D623	D-12	Q617	C-10
D624	D-12	Q618	F-8
D625	D-1	Q619	F-8
D626	D-3		
D627	D-3		
D628	E-12		
D629	E-12		
D630	E-12		
D631	E-12		
D632	G-12		
D633	G-12		

Note on Printed Wiring Board:

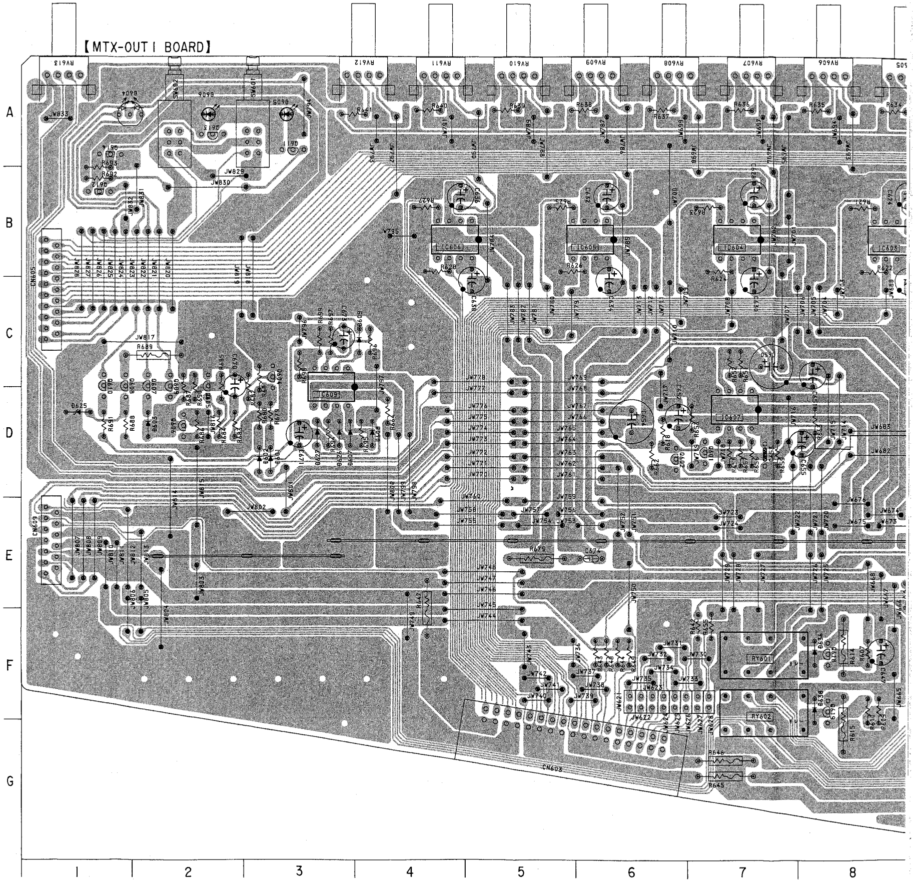
- o——— : parts extracted from the component side.
- ░░░ : Pattern from the side which enables seeing.

プリント図ノート

- o———：部品面側取付のリード線。
- ░░░：見ている面側のパターン。

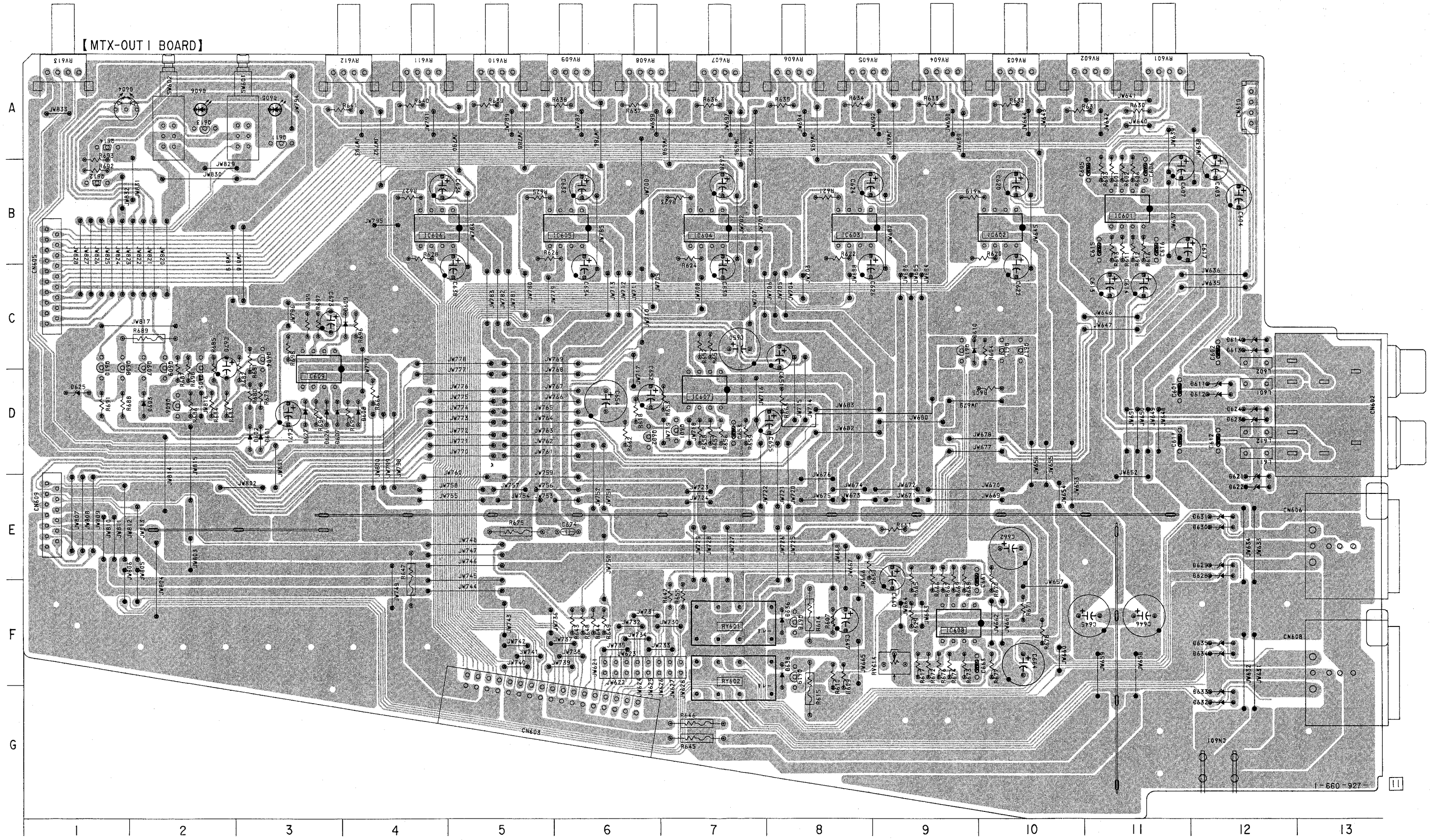
3-18. PRINTED WIRING BOARD – MTX-OUT1 Board –

3-18. プリント図– MTX-OUT1 基板–


【MTX-OUT1 BOARD】
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
IC606
IC605
IC604
IC603
IC609
IC607
RY601
RY602
CN605
CN609
CN603
RV613
RV612
RV611
RV610
RV609
RV608
RV607
RV606

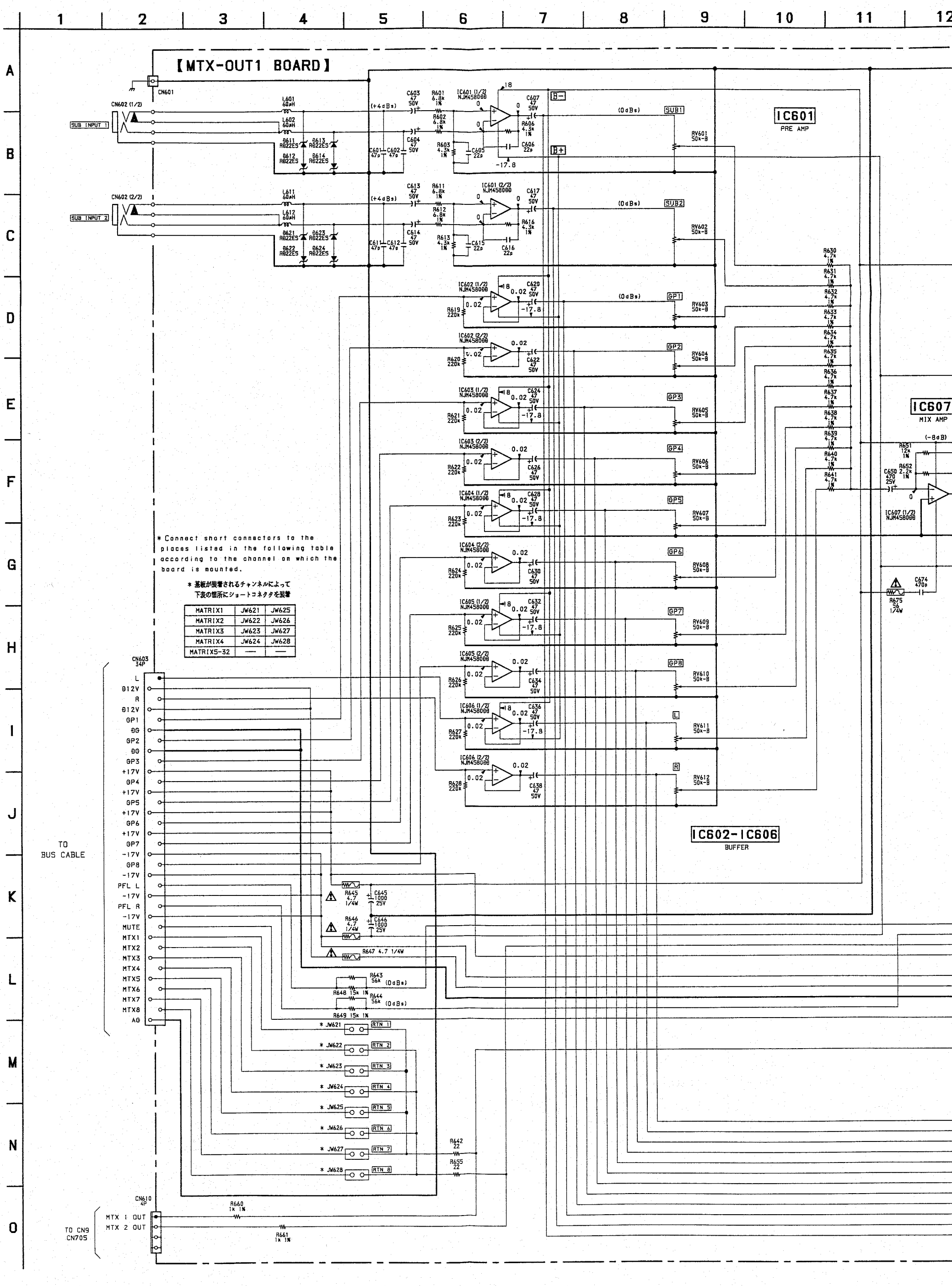
3-18. PRINTED WIRING BOARD – MTX-OUT1 Board –

3-18. プリント図ー MTX-OUT1 基板ー


【MTX-OUT1 BOARD】
RV613
RV612
RV611
RV610
RV609
RV608
RV607
RV606
RV605
RV604
RV603
RV602
RV601
SW602
SW601
CN605
CN609
CN610
CN602
CN606
CN608
CN601
CN603
IC601
IC602
IC603
IC604
IC605
IC606
IC607
IC608
IC609
RY601
RY602
1-660-927-
11
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11
12
13

3-19. SCHEMATIC DIAGRAM – MTX-OUT1 Board –

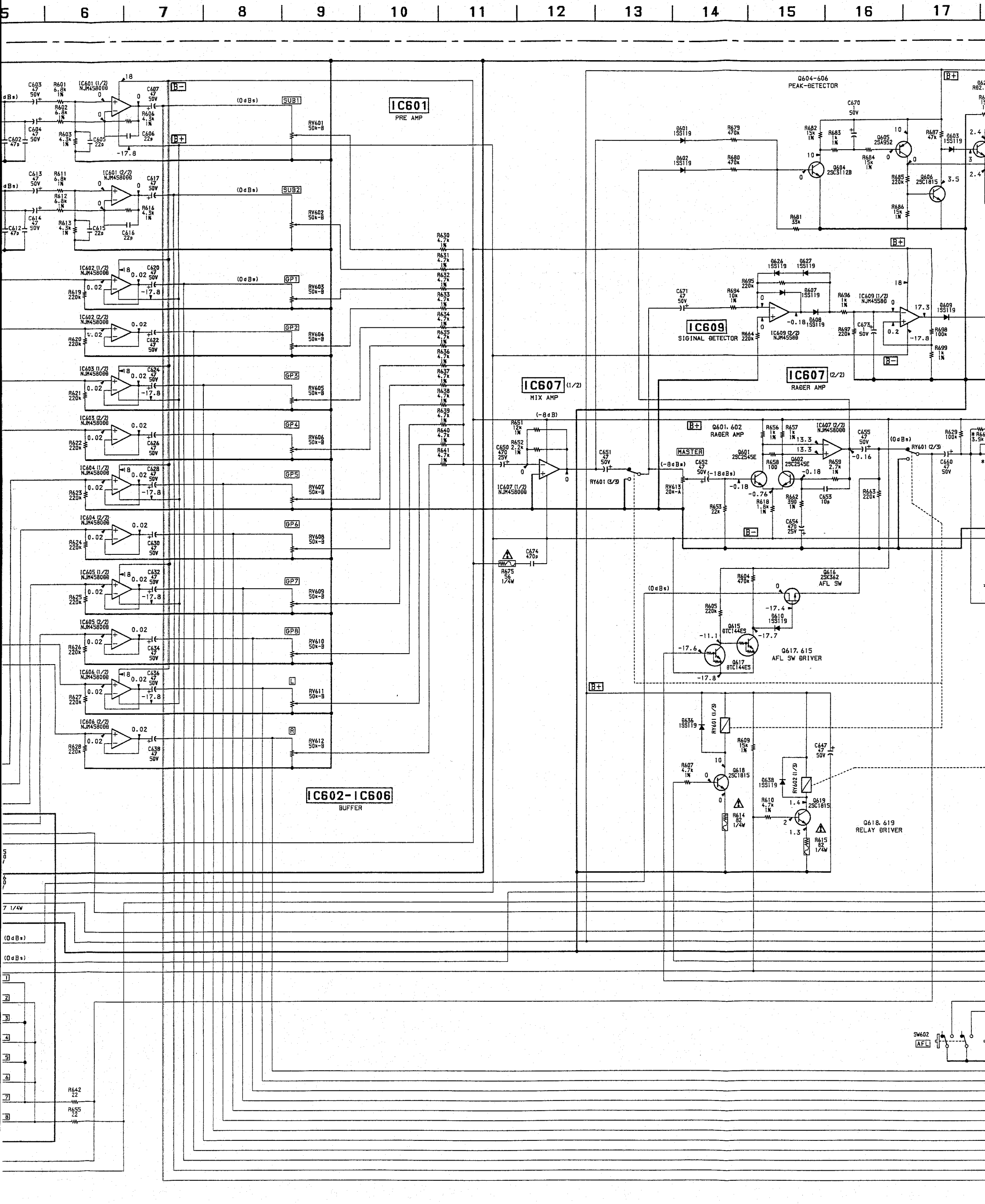
3-19. 回路図ー MTX-OUT1 基板ー

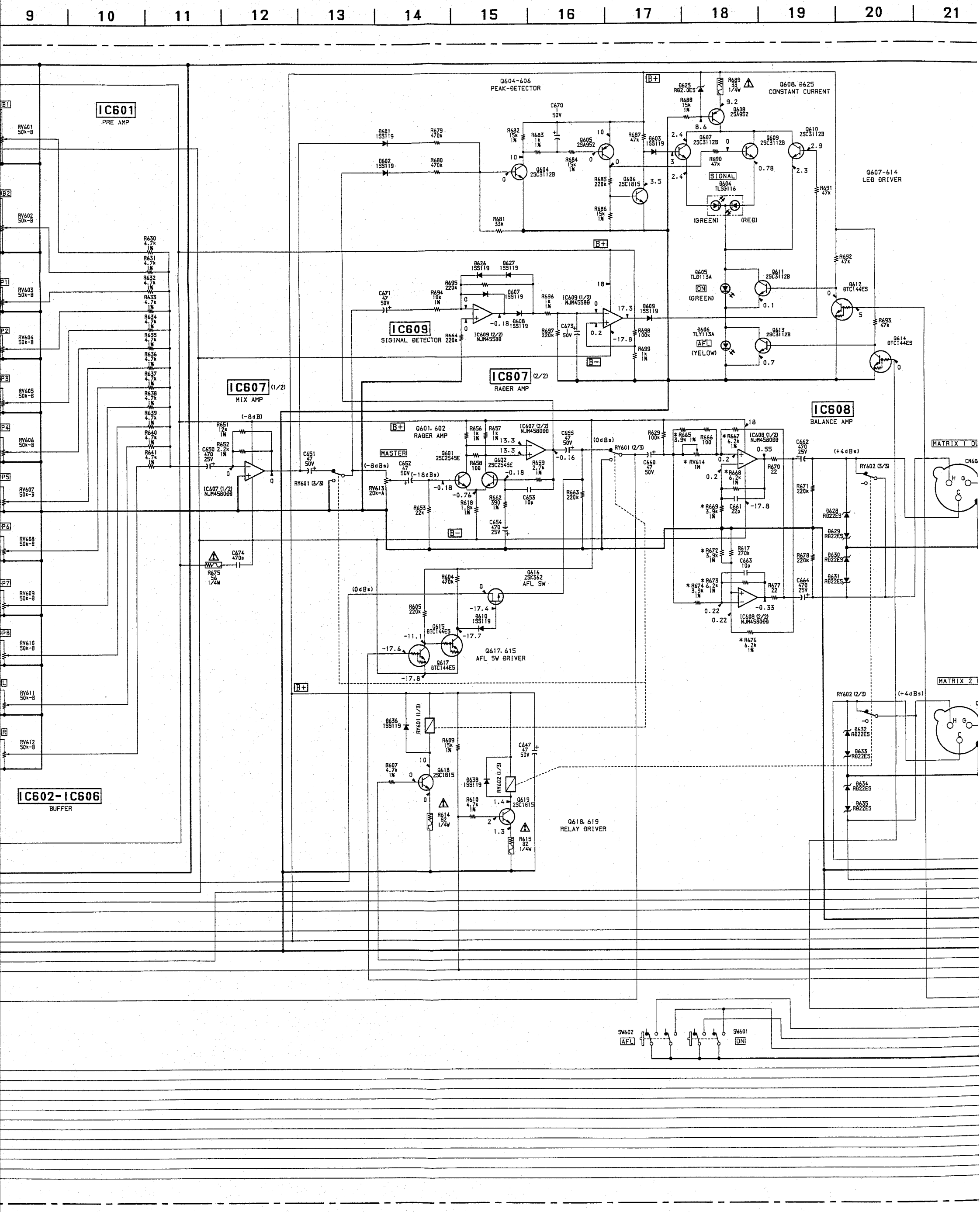

1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
【MTX-OUT1 BOARD】
CN601
CN602 (1/2)
SUB INPUT 1
CN602 (2/2)
SUB INPUT 2
L601 60μH
L602 60μH
L611 60μH
L612 60μH
(+4dBs)
(0dBs)
SUB1
SUB2
B−
B+
-17.8
IC601 (1/2) NJM4580DD
IC601 (2/2) NJM4580DD
IC601
PRE AMP
RV601 50k-B
RV602 50k-B
IC602 (1/2) NJM4580DD
IC602 (2/2) NJM4580DD
IC603 (1/2) NJM4580DD
IC603 (2/2) NJM4580DD
IC604 (1/2) NJM4580DD
IC604 (2/2) NJM4580DD
IC605 (1/2) NJM4580DD
IC605 (2/2) NJM4580DD
IC606 (1/2) NJM4580DD
IC606 (2/2) NJM4580DD
GP1
GP2
GP3
GP4
GP5
GP6
GP7
GP8
L
R
IC602-IC606
BUFFER
IC607
MIX AMP
IC607 (1/2) NJM4580DD
(-8dB)
CN603 34P
L
B12V
R
B12V
GP1
BG
GP2
BG
GP3
+17V
GP4
+17V
GP5
+17V
GP6
+17V
GP7
-17V
GP8
-17V
PFL L
-17V
PFL R
-17V
MUTE
MTX1
MTX2
MTX3
MTX4
MTX5
MTX6
MTX7
MTX8
AG
TO BUS CABLE
R645 4.7 1/4W
R646 4.7 1/4W
R647 4.7 1/4W
C645 1000 25V
C646 1000 25V
R643 56k (0dBs)
R644 56k (0dBs)
R648 15k 1%
R649 15k 1%
* JW621
* JW622
* JW623
* JW624
* JW625
* JW626
* JW627
* JW628
RTN 1
RTN 2
RTN 3
RTN 4
RTN 5
RTN 6
RTN 7
RTN 8
R642 22
R655 22
CN610 4P
MTX 1 OUT
MTX 2 OUT
TO CN9 CN705
R660 1k 1%
R661 1k 1%

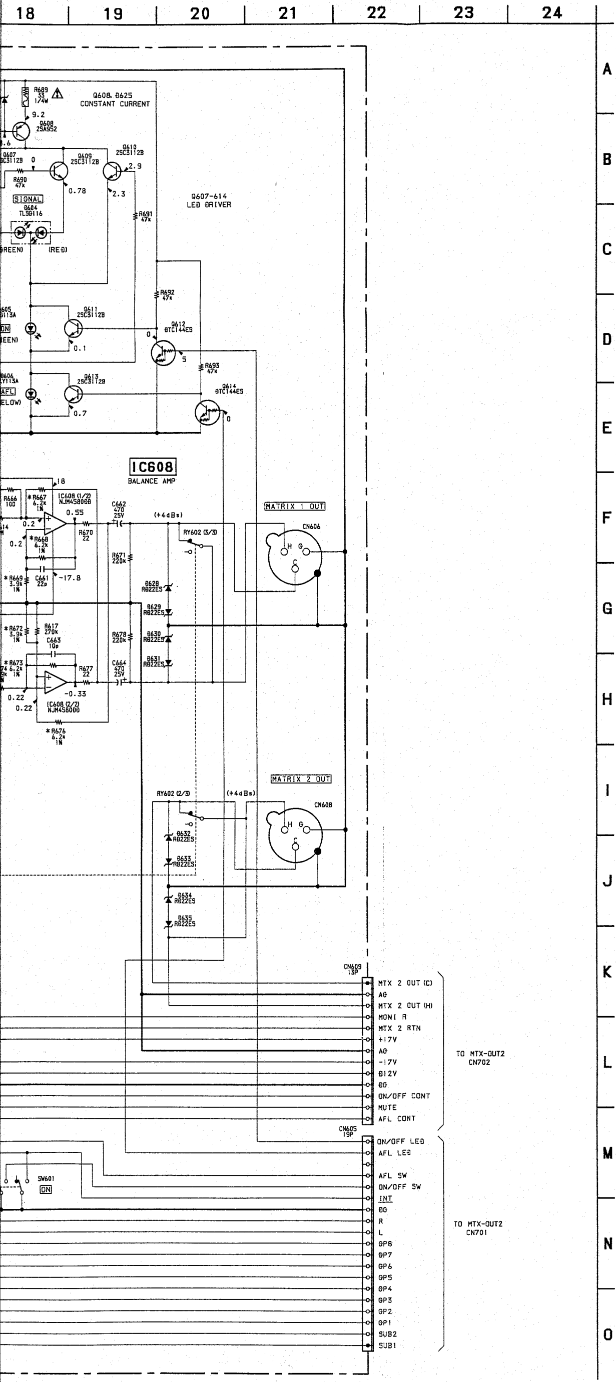
* Connect short connectors to the places listed in the following table according to the channel on which the board is mounted.

* 基板が装着されるチャンネルによって
下表の箇所にショートコネクタを装着

MATRIX1	JW621	JW625
MATRIX2	JW622	JW626
MATRIX3	JW623	JW627
MATRIX4	JW624	JW628
MATRIX5-32	—	—


5
6
7
8
9
10
11
12
13
14
15
16
17
IC601
PRE AMP
IC601 (1/2) NJM4580DD
IC601 (2/2) NJM4580DD
(0dBs)
SUB1
SUB2
GP1
GP2
GP3
GP4
GP5
GP6
GP7
GP8
L
R
RV601 50k-B
RV602 50k-B
RV603 50k-B
RV604 50k-B
RV605 50k-B
RV606 50k-B
RV607 50k-B
RV608 50k-B
RV609 50k-B
RV610 50k-B
RV611 50k-B
RV612 50k-B
IC602-IC606
BUFFER
IC607 (1/2)
MIX AMP
(-8dB)
IC609
SIGINAL DETECTOR
IC607 (2/2)
RADER AMP
Q604-606
PEAK-DETECTOR
Q601, 602
RADER AMP
MASTER
RV613 20k-A
RY601 (3/3)
RY601 (2/3)
Q616 2SK362
AFL SW
Q617, 615
AFL SW DRIVER
Q618, 619
RELAY DRIVER
RY601 (1/3)
RY602 (1/3)
SW602
AFL
B+
B-


9
10
11
12
13
14
15
16
17
18
19
20
21
IC601
PRE AMP
IC602-IC606
BUFFER
RV601 50k-B
RV602 50k-B
RV603 50k-B
RV604 50k-B
RV605 50k-B
RV606 50k-B
RV607 50k-B
RV608 50k-B
RV609 50k-B
RV610 50k-B
RV611 50k-B
RV612 50k-B
R630 4.7k 1%
R631 4.7k 1%
R632 4.7k 1%
R633 4.7k 1%
R634 4.7k 1%
R635 4.7k 1%
R636 4.7k 1%
R637 4.7k 1%
R638 4.7k 1%
R639 4.7k 1%
R640 4.7k 1%
R641 4.7k 1%
IC607 (1/2)
MIX AMP
(-8dB)
R651 12k 1%
R652 2.2k 1%
C650 470 25V
IC607 (1/2) NJM4580DD
R675 56 1/4W
C674 470p
Q604-606
PEAK-DETECTOR
D601 1SS119
D602 1SS119
R679 470k
R680 470k
R681 33k
R682 15k 1%
R683 1k 1%
C670 1 50V
Q604 2SC3112B
Q605 2SA952
R684 15k 1%
R685 220k
Q606 2SC1815
R686 15k 1%
R687 47k
D603 1SS119
D625 RD2.0ES
R688 15k 1%
R689 33 1/4W
Q608, D625
CONSTANT CURRENT
Q608 2SA952
Q607 2SC3112B
Q609 2SC3112B
Q610 2SC3112B
R690 47k
SIGNAL
D604 TLSG116
(GREEN)
(RED)
R691 47k
Q607-614
LED DRIVER
B+
B-
D626 1SS119
D627 1SS119
R695 220k
C671 47 50V
R694 10k 1%
D607 1SS119
D608 1SS119
IC609
SIGINAL DETECTOR
R664 220k
IC609 (2/2) NJM4558D
R696 1k 1%
IC609 (1/2) NJM4558D
R697 220k
C673 1 50V
D609 1SS119
R698 100k
R699 1k 1%
D605 TLG113A
ON
(GREEN)
D606 TLY113A
AFL
(YELOW)
Q611 2SC3112B
Q613 2SC3112B
Q612 DTC144ES
Q614 DTC144ES
R692 47k
R693 47k
IC607 (2/2)
RADER AMP
Q601, 602
RADER AMP
MASTER
C651 47 50V
RY601 (3/3)
RY613 20k-A
C652 47 50V
(-8dBs)
(-18dBs)
Q601 2SC2545E
Q602 2SC2545E
R656 1k 1%
R657 1k 1%
R658 100
IC607 (2/2) NJM4580DD
R659 2.7k 1%
C655 47 50V
R653 22k
R618 1.8k 1%
R662 390 1%
C653 10p
C654 470 25V
R663 220k
(0dBs)
RY601 (2/3)
C660 47 50V
R629 100k
R665 3.9k 1%
R666 100
R667 6.2k 1%
IC608 (1/2) NJM4580DD
RV614 1M
R668 6.2k 1%
R669 3.9k 1%
C661 22p
R670 22
IC608
BALANCE AMP
C662 470 25V
(+4dBs)
R671 220k
RY602 (3/3)
D628 RD22ES
D629 RD22ES
D630 RD22ES
D631 RD22ES
R672 3.9k 1%
R617 270k
C663 10p
R673 6.2k 1%
R674 3.9k 1%
R677 22
R678 220k
C664 470 25V
IC608 (2/2) NJM4580DD
R676 6.2k 1%
MATRIX 1 OU
CN60
MATRIX 2
RY602 (2/3)
D632 RD22ES
D633 RD22ES
D634 RD22ES
D635 RD22ES
R604 470k
Q616 2SK362
AFL SW
R605 220k
D610 1SS119
Q615 DTC144ES
Q617 DTC144ES
Q617, 615
AFL SW DRIVER
D636 1SS119
RY601 (1/3)
R609 15k 1%
R607 4.7k 1%
Q618 2SC1815
R614 82 1/4W
D638 1SS119
RY602 (1/3)
C647 47 50V
R610 4.7k 1%
Q619 2SC1815
R615 82 1/4W
Q618, 619
RELAY DRIVER
SW602
AFL
SW601
ON


18
19
20
21
22
23
24
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
R689 33 1/4W
Q608, Q625 CONSTANT CURRENT
Q608 2SA952
Q607 2SC3112B
Q609 2SC3112B
Q610 2SC3112B
R690 47k
SIGNAL
Q604 TLS8116
(GREEN)
(RED)
Q607-614 LED DRIVER
R691 47k
R692 47k
Q611 2SC3112B
Q612 DTC144ES
ON
R693 47k
Q613 2SC3112B
Q614 DTC144ES
AFL
(YELLOW)
IC608
BALANCE AMP
R666 100
R667 6.2k 1%
IC608 (1/2) NJM4580DD
C662 470 25V
(+4dBs)
MATRIX 1 OUT
CN606
RY602 (3/3)
R670 22
R668 6.2k 1%
R671 220k
R669 3.9k 1%
C661 22p
-17.8
D628 RD22ES
D629 RD22ES
R672 3.9k 1%
R617 270k
C663 10p
R678 220k
D630 RD22ES
D631 RD22ES
R673 6.2k 1%
R677 22
C664 470 25V
IC608 (2/2) NJM4580DD
R676 6.2k 1%
MATRIX 2 OUT
CN608
RY602 (2/3)
(+4dBs)
D632 RD22ES
D633 RD22ES
D634 RD22ES
D635 RD22ES
CN609 13P
MTX 2 OUT (C)
AG
MTX 2 OUT (H)
MONI R
MTX 2 RTN
+17V
AG
-17V
D12V
DG
ON/OFF CONT
MUTE
AFL CONT
TO MTX-OUT2 CN702
CN605 15P
ON/OFF LED
AFL LED
AFL SW
ON/OFF SW
INT
DG
R
L
GP8
GP7
GP6
GP5
GP4
GP3
GP2
GP1
SUB2
SUB1
SW601
ON
TO MTX-OUT2 CN701

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B- Line.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

回路図ノート

- ケミコン、タンタルを除くコンデンサで、耐圧50V以下のものは、その耐圧を省略。単位はすべてμF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- ：ヒューズ抵抗。
- ▭ ：パネル表示名称。
- B+ ：B＋ライン。
- B− ：B－ライン。

⚠印の部品、または⚠印付きの点線で囲まれた部品は、安全性を維持するために、重要な部品です。
従って交換時は、必ず指定の部品を使用して下さい。

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⊣ꟿ⊢ : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B− : B- Line.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

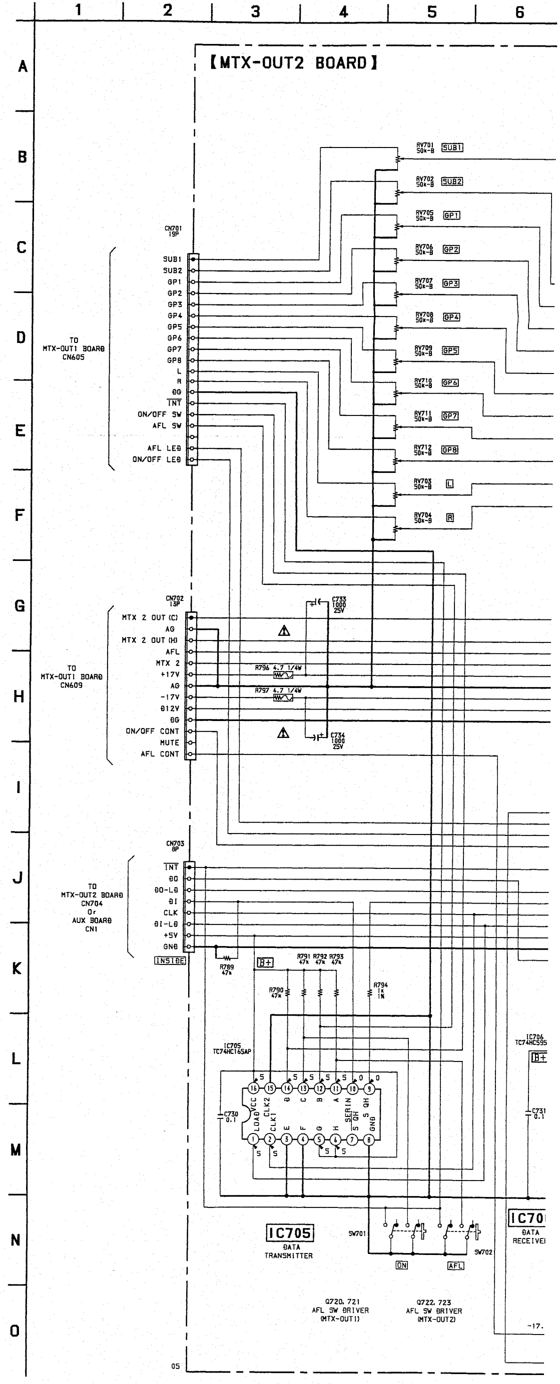
回路図ノート

- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは，その耐圧を省略。単位はすべて μF（p は pF)。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- ⊣ꟿ⊢ ：ヒューズ抵抗。
- ▭ ：パネル表示名称。
- B+ ：B＋ライン。
- B− ：B－ライン。

⚠印の部品，または ⚠印付きの点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

3-20. SCHEMATIC DIAGRAM – MTX-OUT2 and CN9 Boards –

3-20. 回路図－ MTX-OUT2, CN9 基板－


1
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A
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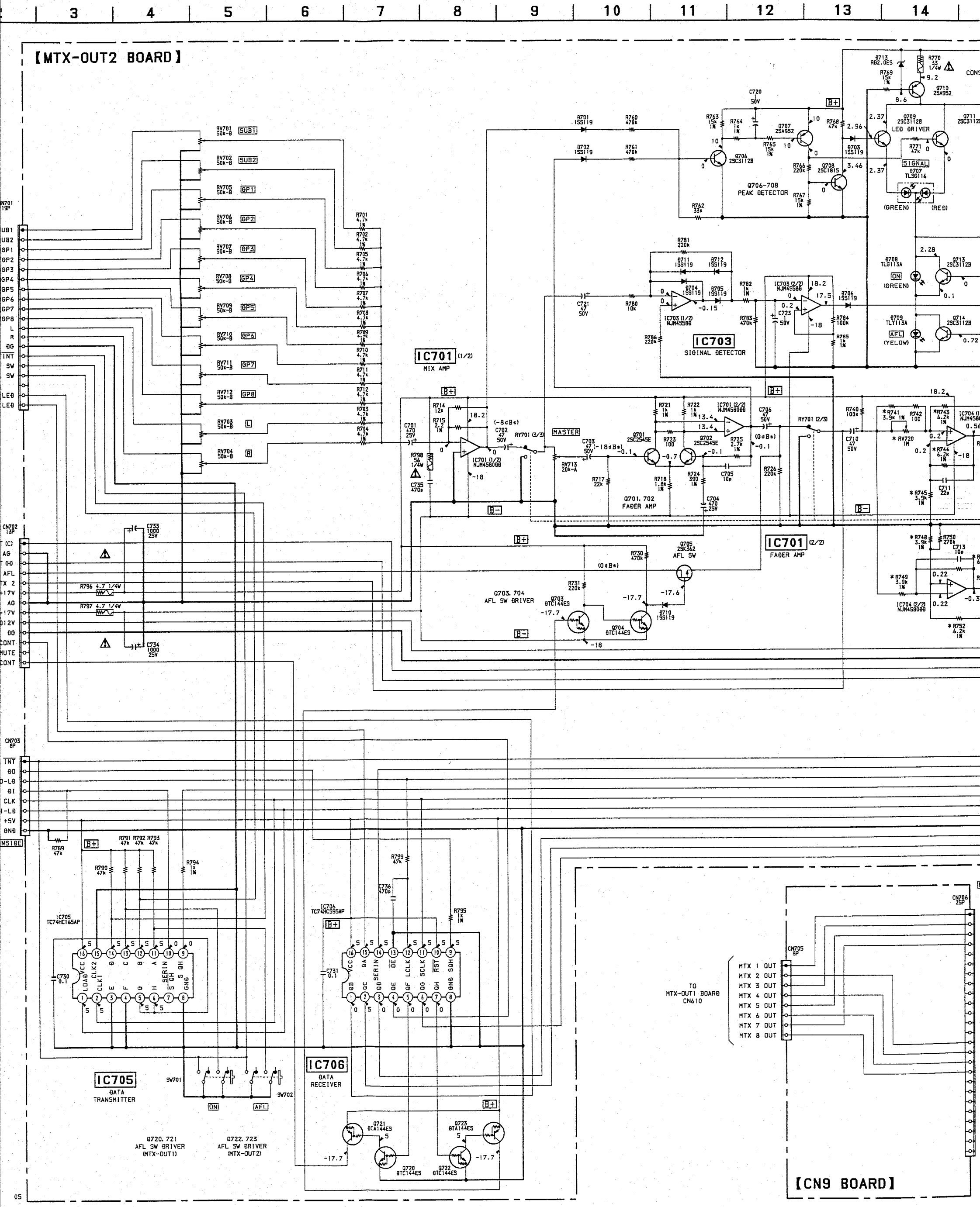
C
D
E
F
G
H
I
J
K
L
M
N
O
【MTX-OUT2 BOARD】
CN701
19P
TO
MTX-OUT1 BOARD
CN605
SUB1
SUB2
GP1
GP2
GP3
GP4
GP5
GP6
GP7
GP8
L
R
DG
INT
ON/OFF SW
AFL SW
AFL LED
ON/OFF LED
RV701 50k-B SUB1
RV702 50k-B SUB2
RV705 50k-B GP1
RV706 50k-B GP2
RV707 50k-B GP3
RV708 50k-B GP4
RV709 50k-B GP5
RV710 50k-B GP6
RV711 50k-B GP7
RV712 50k-B GP8
RV703 50k-B L
RV704 50k-B R
CN702
13P
TO
MTX-OUT1 BOARD
CN609
MTX 2 OUT (C)
AG
MTX 2 OUT (H)
AFL
MTX 2
+17V
AG
-17V
D12V
DG
ON/OFF CONT
MUTE
AFL CONT
C733 1000 25V
R796 4.7 1/4W
R797 4.7 1/4W
C734 1000 25V
⚠
⚠
CN703
8P
TO
MTX-OUT2 BOARD
CN704
Or
AUX BOARD
CN1
INT
DO
DO-LD
DI
CLK
DI-LD
+5V
GND
INSIDE
R789 47k
B+
R791 47k
R792 47k
R793 47k
R790 47k
R794 1k 1%
IC705
TC74HC165AP
VCC
CLK2
D
C
B
A
SERIN
S QH
LOAD
CLK1
E
F
G
H
S QH
GND
C730 0.1
IC705
DATA TRANSMITTER
SW701
SW702
ON
AFL
Q720, 721
AFL SW DRIVER
(MTX-OUT1)
Q722, 723
AFL SW DRIVER
(MTX-OUT2)
IC706
TC74HC595
B+
C731 0.1
IC70
DATA RECEIVE
-17.
05

AGRAM – MTX-OUT2 and CN9 Boards –

T2, CN9 基板一



3
4
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7
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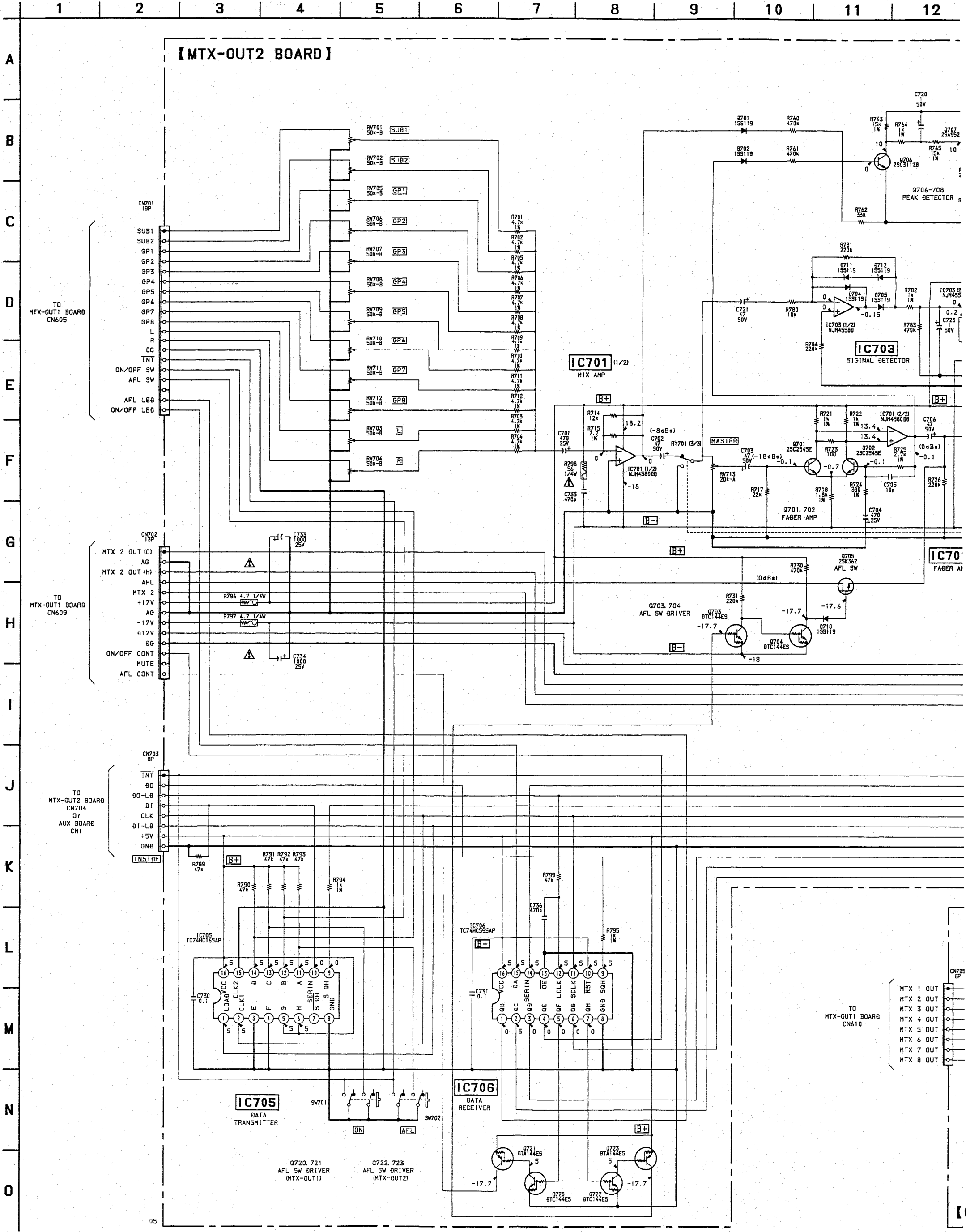
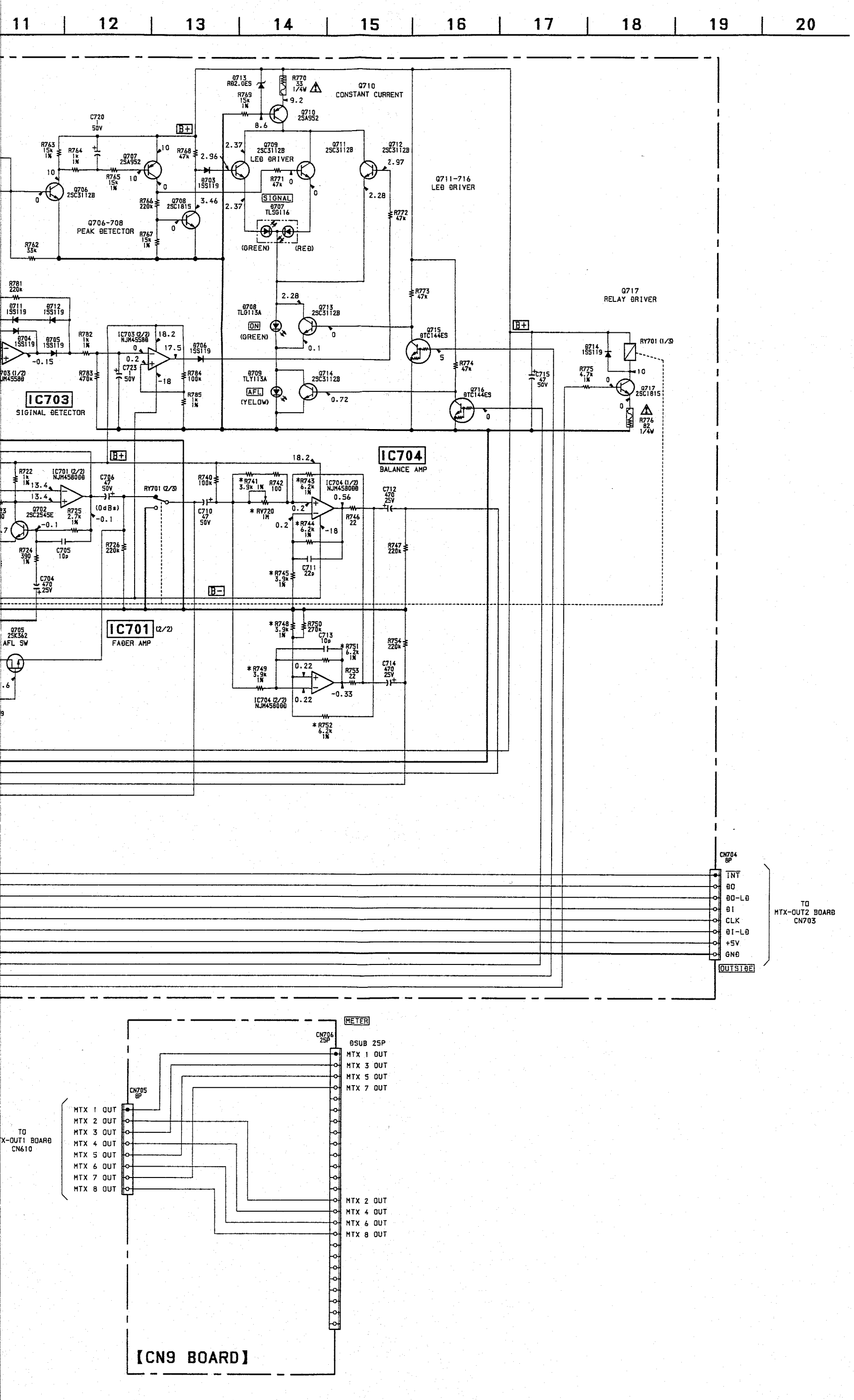
9
10
11
12
13
14
【MTX-OUT2 BOARD】
【CN9 BOARD】
IC701 (1/2) MIX AMP
IC701 (2/2) FADER AMP
IC703 SIGINAL DETECTOR
IC705 DATA TRANSMITTER
IC706 DATA RECEIVER
Q701, 702 FADER AMP
Q703, 704 AFL SW DRIVER
Q705 2SK362 AFL SW
Q706-708 PEAK DETECTOR
Q709 2SC3112B LED DRIVER
Q720, 721 AFL SW DRIVER (MTX-OUT1)
Q722, 723 AFL SW DRIVER (MTX-OUT2)
MASTER
SUB1
SUB2
GP1
GP2
GP3
GP4
GP5
GP6
GP7
GP8
L
R
SIGNAL
ON
AFL
(GREEN)
(RED)
(YELOW)
SW701
SW702
TO MTX-OUT1 BOARD CN610
MTX 1 OUT
MTX 2 OUT
MTX 3 OUT
MTX 4 OUT
MTX 5 OUT
MTX 6 OUT
MTX 7 OUT
MTX 8 OUT
CN701 19P
CN702 13P
CN703 8P
CN705 8P
CN706 25P
IC705 TC74HC165AP
IC706 TC74HC595AP

3-20. SCHEMATIC DIAGRAM – MTX-OUT2 and CN9 Boards –

3-20. 回路図－MTX-OUT2, CN9 基板－

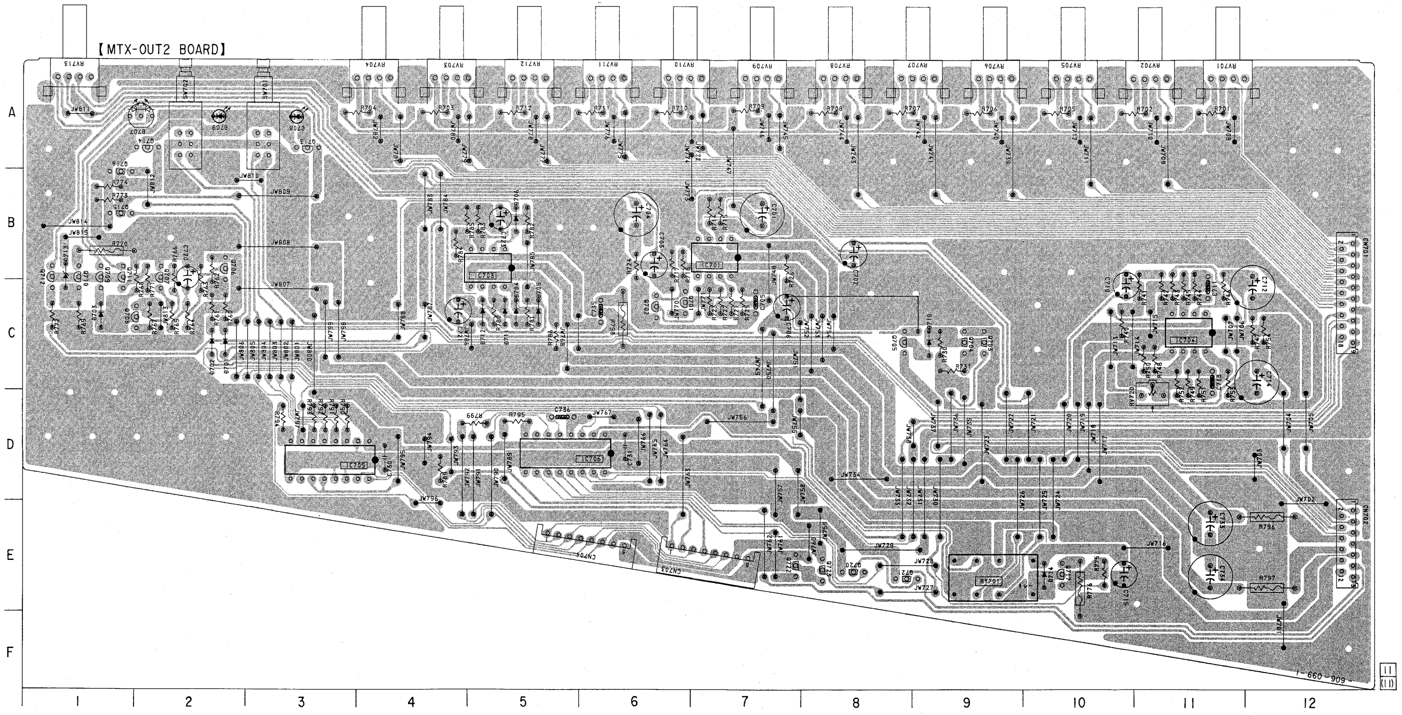


【MTX-OUT2 BOARD】
CN701 19P
SUB1
SUB2
GP1
GP2
GP3
GP4
GP5
GP6
GP7
GP8
L
R
DG
INT
ON/OFF SW
AFL SW
AFL LED
ON/OFF LED
TO MTX-OUT1 BOARD CN605
RV701 50k-B SUB1
RV702 50k-B SUB2
RV705 50k-B GP1
RV706 50k-B GP2
RV707 50k-B GP3
RV708 50k-B GP4
RV709 50k-B GP5
RV710 50k-B GP6
RV711 50k-B GP7
RV712 50k-B GP8
RV703 50k-B L
RV704 50k-B R
IC701 (1/2) MIX AMP
IC703 SIGNAL DETECTOR
Q706-708 PEAK DETECTOR
MASTER
Q701, 702 FADER AMP
Q705 2SK362 AFL SW
Q703, 704 AFL SW DRIVER
CN702 13P
MTX 2 OUT (C)
AG
MTX 2 OUT (H)
AFL
MTX 2
+17V
AG
-17V
D12V
DG
ON/OFF CONT
MUTE
AFL CONT
TO MTX-OUT1 BOARD CN609
CN703 8P
INT
DO
DO-LD
DI
CLK
DI-LD
+5V
GND
TO MTX-OUT2 BOARD CN704 Or AUX BOARD CN1
INSIDE
IC705 TC74HC165AP
IC705 DATA TRANSMITTER
IC706 TC74HC595AP
IC706 DATA RECEIVER
SW701
SW702
ON
AFL
Q720, 721 AFL SW DRIVER (MTX-OUT1)
Q722, 723 AFL SW DRIVER (MTX-OUT2)
Q721 DTA144ES
Q723 DTA144ES
Q720 DTC144ES
Q722 DTC144ES
CN705 8P
MTX 1 OUT
MTX 2 OUT
MTX 3 OUT
MTX 4 OUT
MTX 5 OUT
MTX 6 OUT
MTX 7 OUT
MTX 8 OUT
TO MTX-OUT1 BOARD CN610
IC701 (2/2) NJM4580DD
IC703 (1/2) NJM4558D
1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H I J K L M N O


11
12
13
14
15
16
17
18
19
20
D713 RB2.0ES
R770 33 1/4W
Q710 CONSTANT CURRENT
R769 15k 1%
9.2
Q710 2SA952
8.6
C720 1 50V
B+
R763 15k 1%
R764 1k 1%
Q707 2SA952
10
R768 47k
2.96
2.37
Q709 2SC3112B LED DRIVER
Q711 2SC3112B
Q712 2SC3112B
2.97
R765 15k 1%
D703 1SS119
R771 47k
Q706 2SC3112B
R766 220k
Q708 2SC1815
3.46
SIGNAL
D707 TLSG116
2.28
Q711-716 LED DRIVER
R772 47k
Q706-708 PEAK DETECTOR
R767 15k 1%
(GREEN)
(RED)
R762 33k
R781 220k
D711 1SS119
D712 1SS119
D708 TLG113A
2.28
Q713 2SC3112B
ON
(GREEN)
0.1
R773 47k
Q717 RELAY DRIVER
D704 1SS119
D705 1SS119
R782 1k 1%
IC703 (2/2) NJM4558D
18.2
17.5
D706 1SS119
Q715 DTC144ES
B+
D714 1SS119
RY701 (1/3)
-0.15
0.2
C723 1 50V
-18
R784 100k
R774 47k
5
IC703 (1/2) NJM4558D
R783 470k
D709 TLY113A
AFL
(YELOW)
Q714 2SC3112B
0.72
C715 47 50V
R775 4.7k 1%
Q717 2SC1815
IC703
SIGINAL DETECTOR
R785 1k 1%
Q716 DTC144ES
R776 82 1/4W
IC704
BALANCE AMP
B+
18.2
R722 1k 1%
IC701 (2/2) NJM4558DD
C706 47 50V
R740 100k
R741 3.9k 1%
R742 100
R743 6.2k 1%
IC704 (1/2) NJM4558DD
C712 470 25V
13.4
0.56
13.4
RY701 (2/3)
C710 47 50V
RV720 1M
0.2
Q702 2SC2545E
R725 2.7k 1%
(0dBs)
-0.1
0.2
R744 6.2k 1%
-18
R746 22
-0.1
R724 390 1%
C705 10p
R726 220k
R747 220k
C711 22p
C704 470 25V
R745 3.9k 1%
B-
Q705 2SK362
AFL SW
IC701 (2/2)
FADER AMP
R748 3.9k 1%
R750 270k
C713 10p
R751 6.2k 1%
R754 220k
0.22
R749 3.9k 1%
R753 22
C714 470 25V
IC704 (2/2) NJM4558DD
0.22
-0.33
R752 6.2k 1%
CN704 8P
INT
DO
DO-LD
DI
CLK
DI-LD
+5V
GND
OUTSIDE
TO MTX-OUT2 BOARD CN703
METER
CN706 25P
DSUB 25P
MTX 1 OUT
MTX 3 OUT
MTX 5 OUT
MTX 7 OUT
CN705 8P
MTX 1 OUT
MTX 2 OUT
MTX 3 OUT
MTX 4 OUT
MTX 5 OUT
MTX 6 OUT
MTX 7 OUT
MTX 8 OUT
TO X-OUT1 BOARD CN610
MTX 2 OUT
MTX 4 OUT
MTX 6 OUT
MTX 8 OUT
[CN9 BOARD]

3-21. PRINTED WIRING BOARDS – MTX-OUT2 and CN9 Boards –

3-21. プリント図ー MTX-OUT2, CN9 基板ー


【MTX-OUT2 BOARD】
RV713
SW702
SW701
RV704
RV703
RV712
RV711
RV710
RV709
RV708
RV707
RV706
RV705
RV702
RV701
CN701
CN702
CN703
CN704
IC701
IC703
IC704
IC705
IC706
RY701
C733
C734
R796
R797
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
11
12
1-660-909-
11
(11)

• MTX-OU

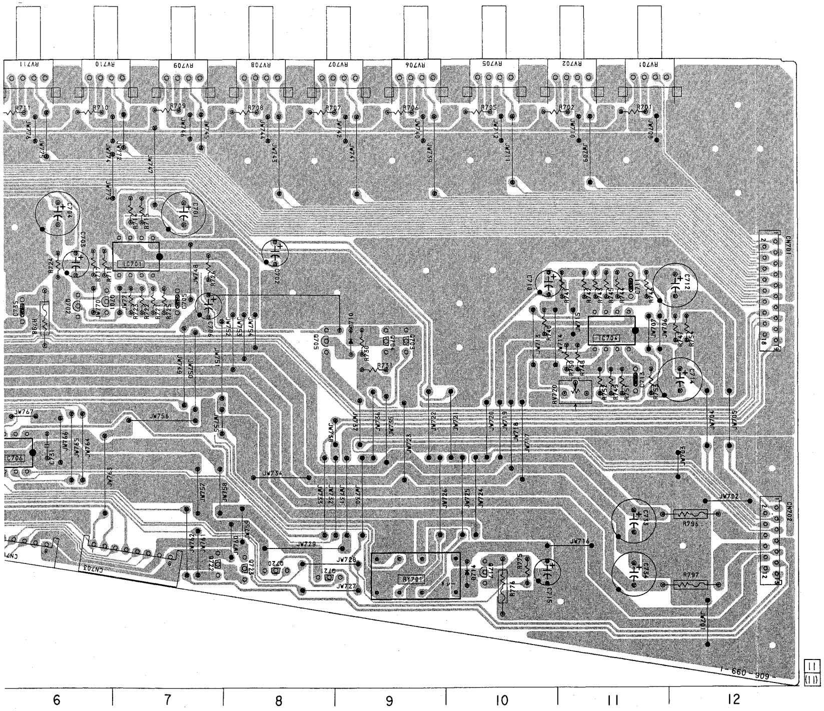
Ref. No.
CN701
CN702
CN703
CN704
D701
D702
D703
D704
D705
D706
D707
D708
D709
D710
D711
D712
D713
D714
IC701
IC703
IC704
IC705
IC706

Note on Pri

- o——— :
- ▨ :

プリント図.

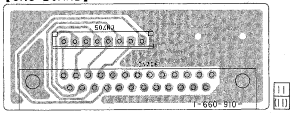
- o———：部
- ▨：見


RV711
RV710
RV709
RV708
RV707
RV706
RV705
RV702
RV701
IC701
IC704
IC706
RY701
CN701
CN702
CN703
R796
R797
1-660-909-11
11
(11)
6
7
8
9
10
11
12

• MTX-OUT2 Board Location

Ref. No.	Location	Ref. No.	Location
CN701	C-12	Q701	C-6
CN702	E-12	Q702	C-6
CN703	E-7	Q703	C-9
CN704	E-6	Q704	C-9
		Q705	C-8
D701	C-2	Q706	B-2
D702	C-2	Q707	B-2
D703	C-1	Q708	C-2
D704	C-5	Q709	B-1
D705	C-5	Q710	B-1
D706	B-5	Q711	B-1
D707	A-2	Q712	B-2
D708	A-3	Q713	A-3
D709	A-2	Q714	A-2
D710	C-9	Q715	B-1
D711	C-5	Q716	B-1
D712	C-5	Q717	E-10
D713	B-1	Q720	E-8
D714	E-10	Q721	E-8
		Q722	E-7
IC701	B-7	Q723	E-8
IC703	B-5		
IC704	C-11		
IC705	D-3		
IC706	D-5		

【CN9 BOARD】


CN705
CN706
1-660-910-11
11
(11)

Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

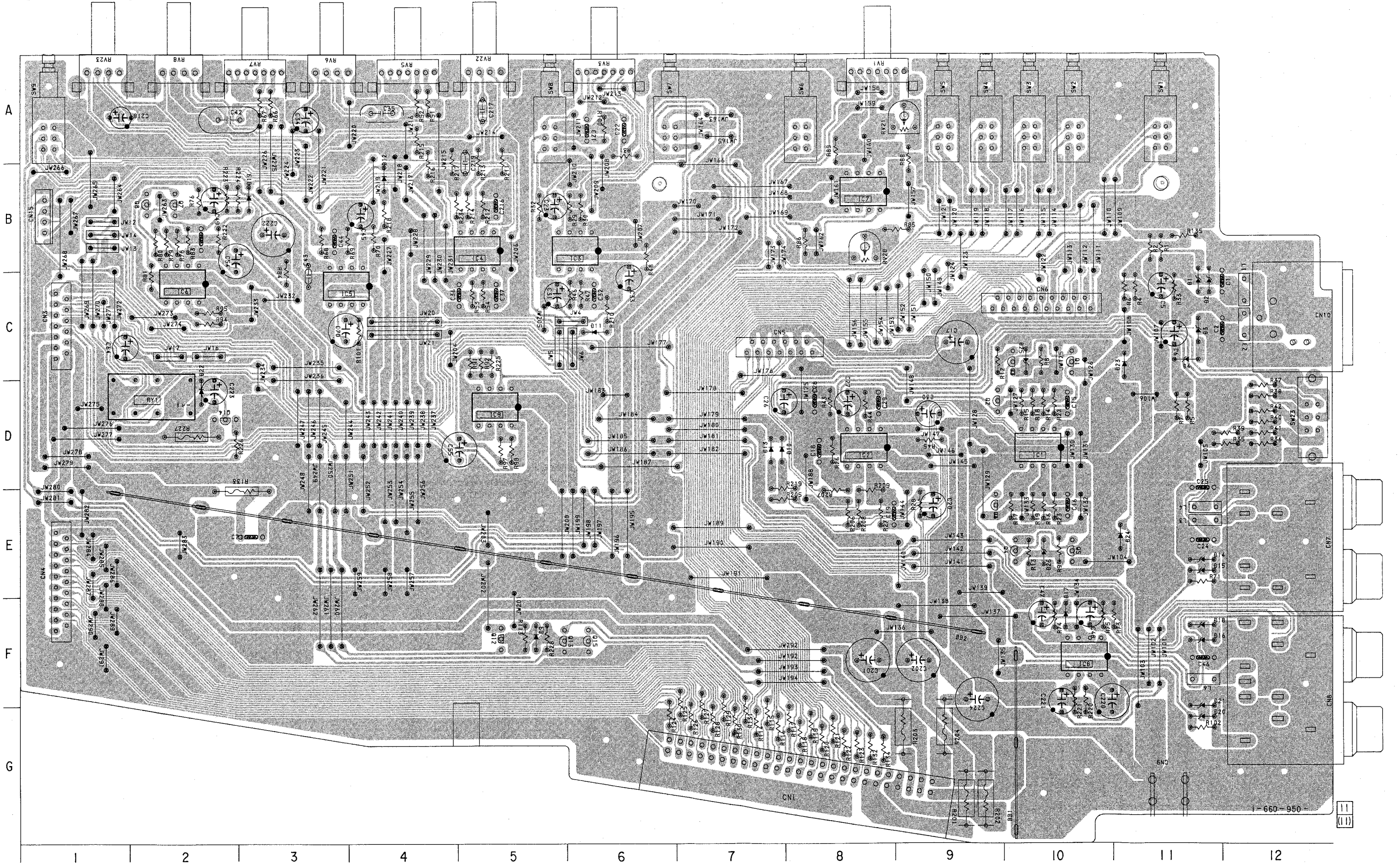
プリント図ノート

- ○——：部品面側取付のリード線。
- ▨：見ている面側のパターン。

3-22. PRINTED WIRING BOARDS – MN-IN1 and MN-IN2 Boards –

3-22. プリント図ー MN-IN1, MN-IN2 基板ー

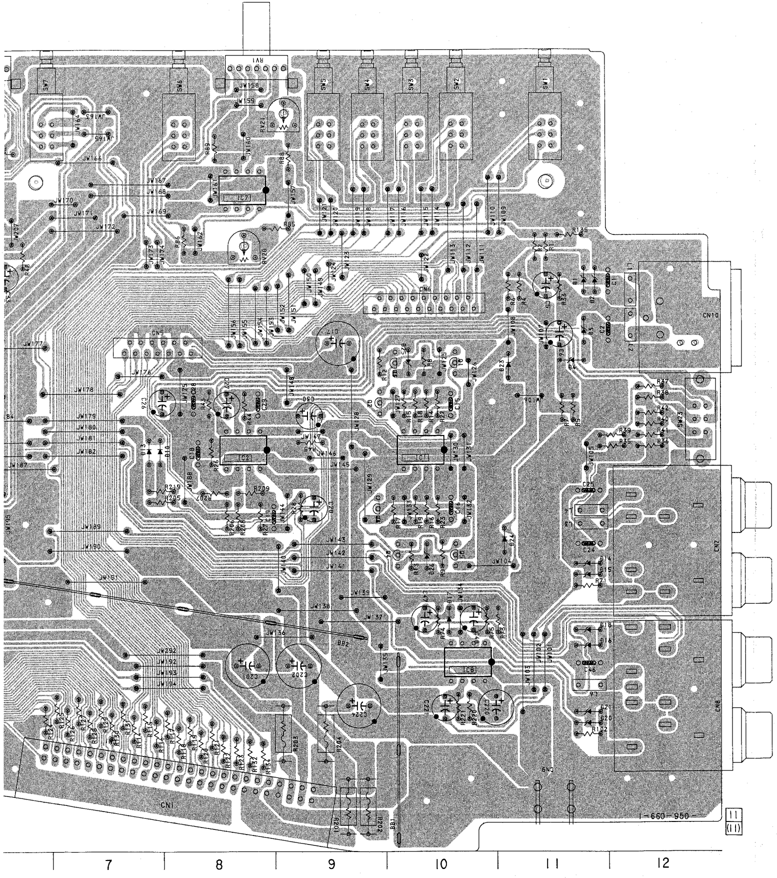
【MN-INI BOARD】


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11
12
RV23
RV8
RV7
RV6
RV5
RV22
RV3
RV1
RV21
SW9
SW8
SW7
SW6
SW5
SW4
SW3
SW2
SW1
SW23
CN1
CN3
CN4
CN5
CN6
CN7
CN8
CN10
CN15
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
RY1
1-660-950-11
11
(11)

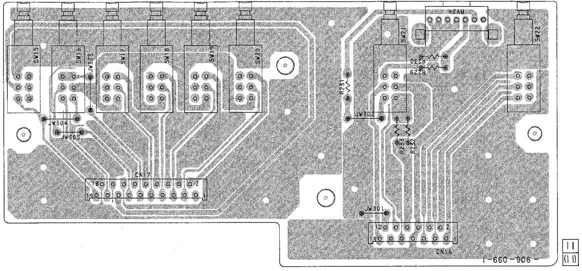
• MN-IN1 BO

Ref. No.	Lo
CN1	G
CN3	C
CN4	E
CN5	C
CN6	C
CN7	E
CN8	F
CN9	G
CN10	C
CN15	B
D1	C
D2	C
D3	C
D4	C
D9	F
D10	D
D11	C
D12	B
D13	D
D14	E
D15	E
D16	F
D17	F
D18	F
D19	B
D20	G
D21	G
D22	D

【


CN1
CN2
CN5
CN6
CN8
CN10
IC1
IC2
IC7
IC8
RV1
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW23
GND
1-660-950-11
7
8
9
10
11
12

【MN-IN2 BOARD】


SW15
SW16
SW17
SW18
SW19
SW20
SW21
SW22
RV2
CN17
CN16
1-660-906-11

• MN-IN1 BOARD Location

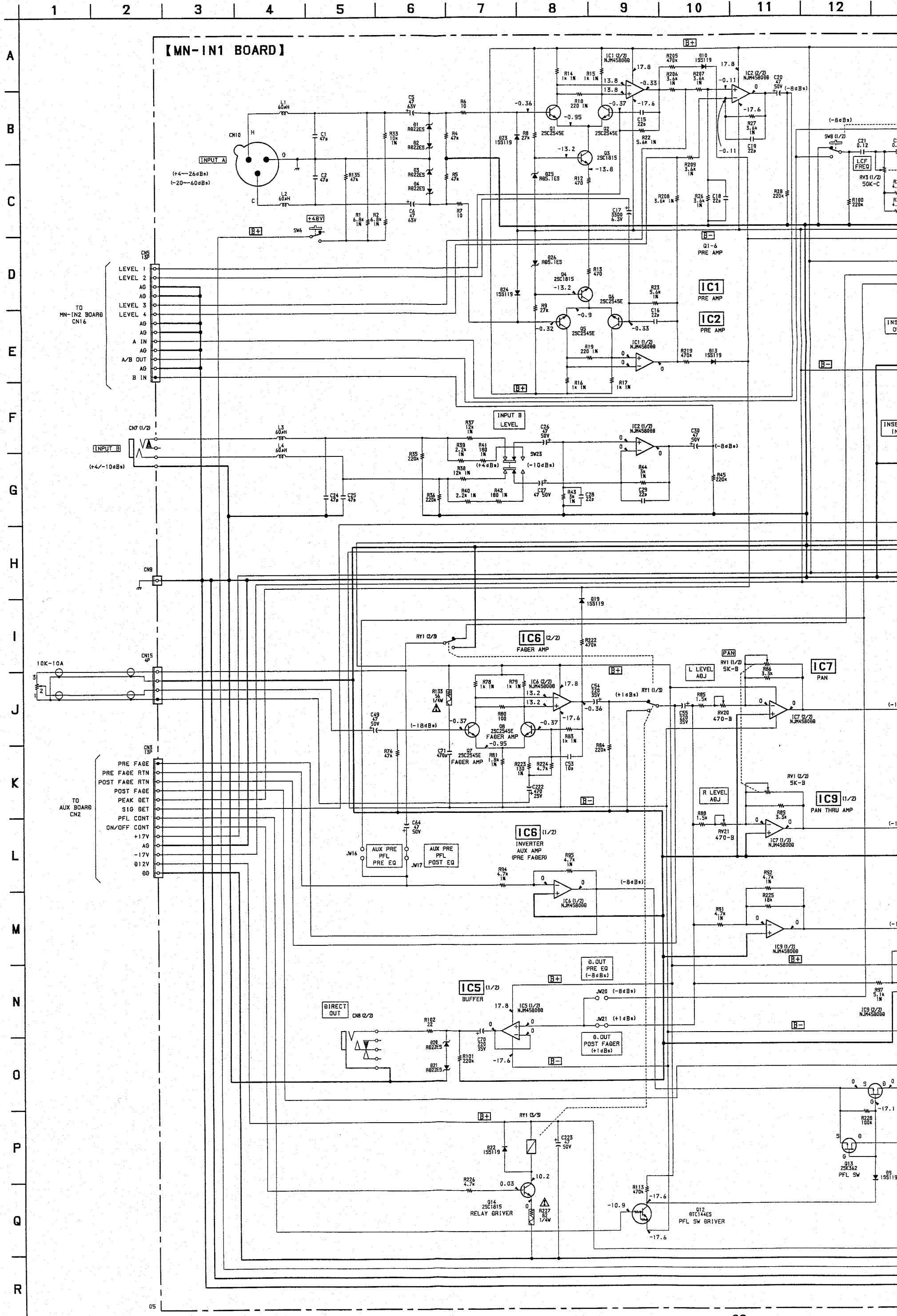
Ref. No.	Location	Ref. No.	Location
CN1	G-8	D23	C-11
CN3	C-1	D24	E-11
CN4	E-1	D25	C-10
CN5	C-7	D26	E-10
CN6	C-10		
CN7	E-12	IC1	D-10
CN8	F-12	IC2	D-8
CN9	G-11	IC3	B-6
CN10	C-12	IC4	B-5
CN15	B-1	IC5	C-3
		IC6	C-2
D1	C-11	IC7	B-8
D2	C-11	IC8	F-10
D3	C-11	IC9	D-5
D4	C-11		
D9	F-5	Q1	C-10
D10	D-7	Q2	D-9
D11	C-6	Q3	C-10
D12	B-4	Q4	E-10
D13	D-7	Q5	E-10
D14	E-11	Q6	E-9
D15	E-11	Q7	B-2
D16	F-11	Q8	B-2
D17	F-10	Q12	F-5
D18	F-11	Q13	F-5
D19	B-3	Q14	D-2
D20	G-11	Q15	F-6
D21	G-11		
D22	D-2		

Note on Printed Wiring Board:
- o——— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

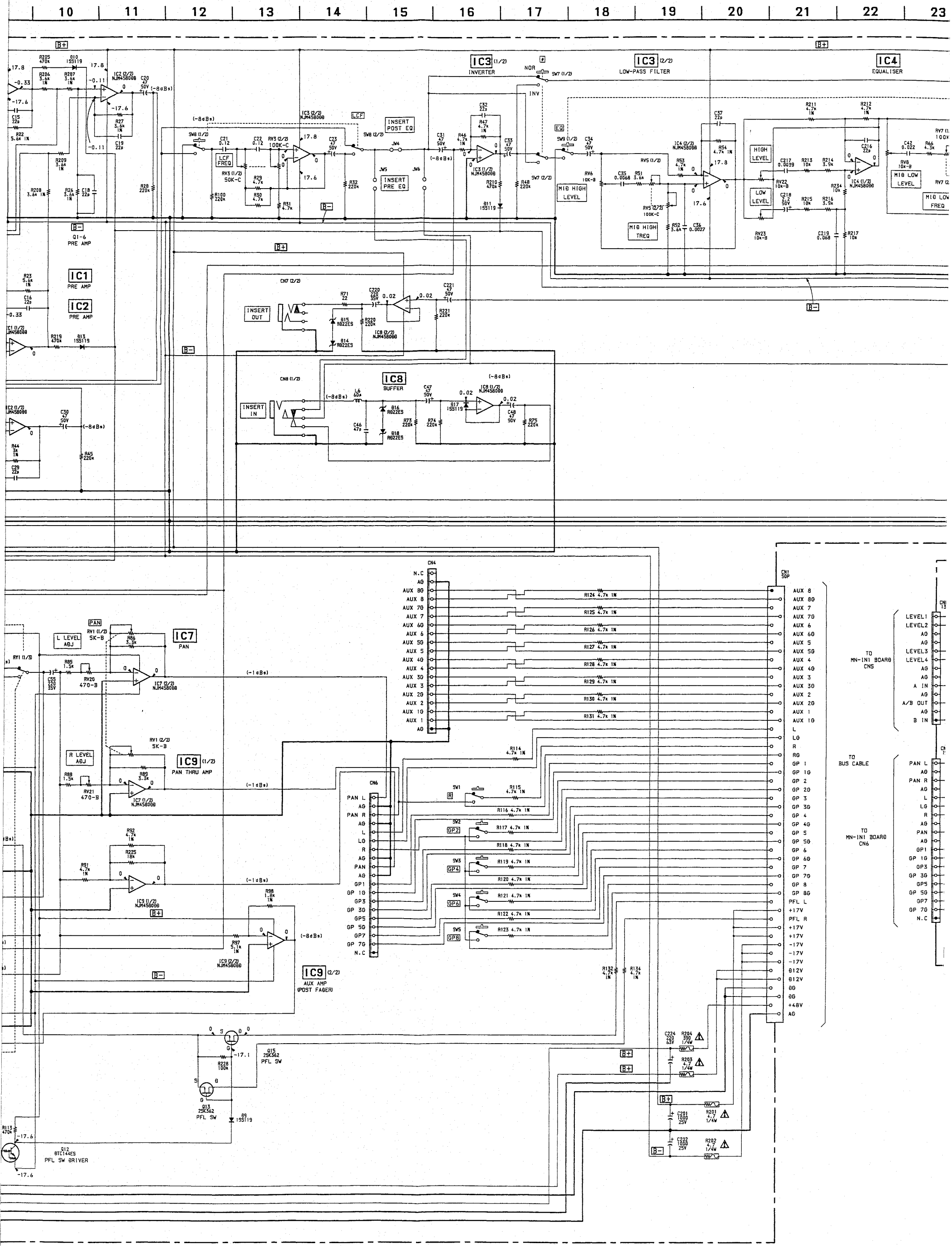
プリント図ノート
- o———：部品面側取付のリード線。
- ▨：見ている面側のパターン。

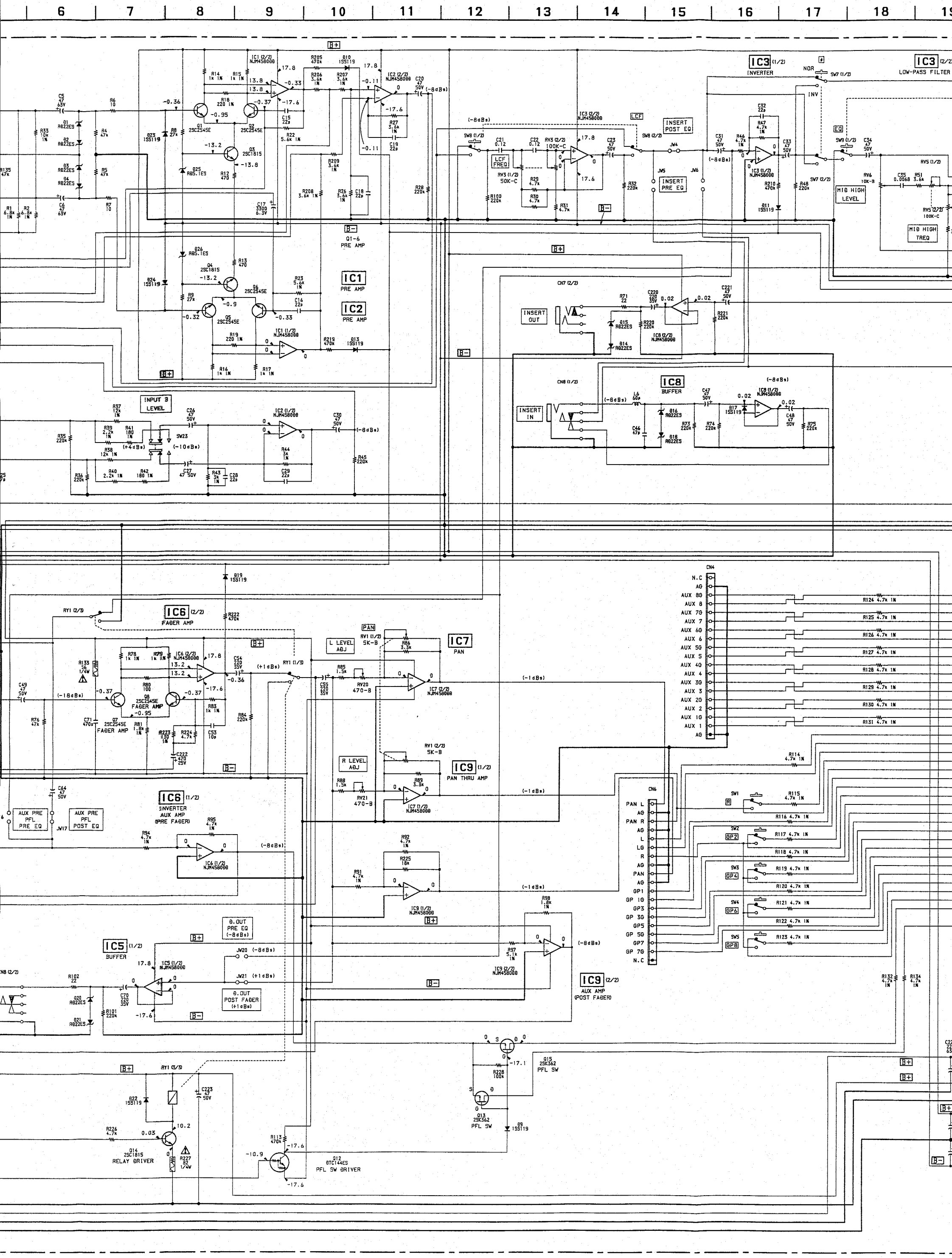
3-23. SCHEMATIC DIAGRAM – MN-IN1 and MN-IN2 Boards –

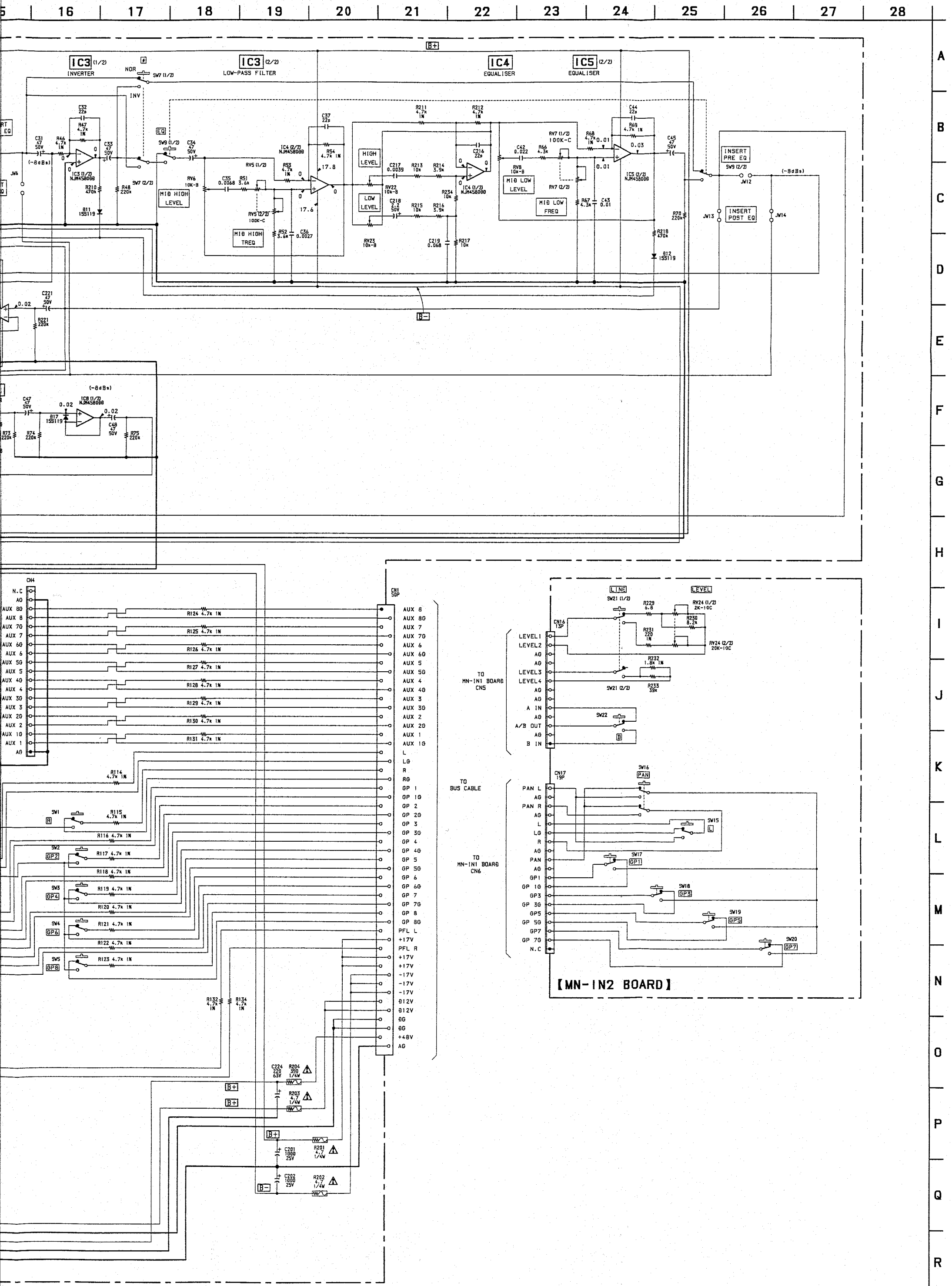
3-23. 回路図ー MN-IN1, MN-IN2 基板ー

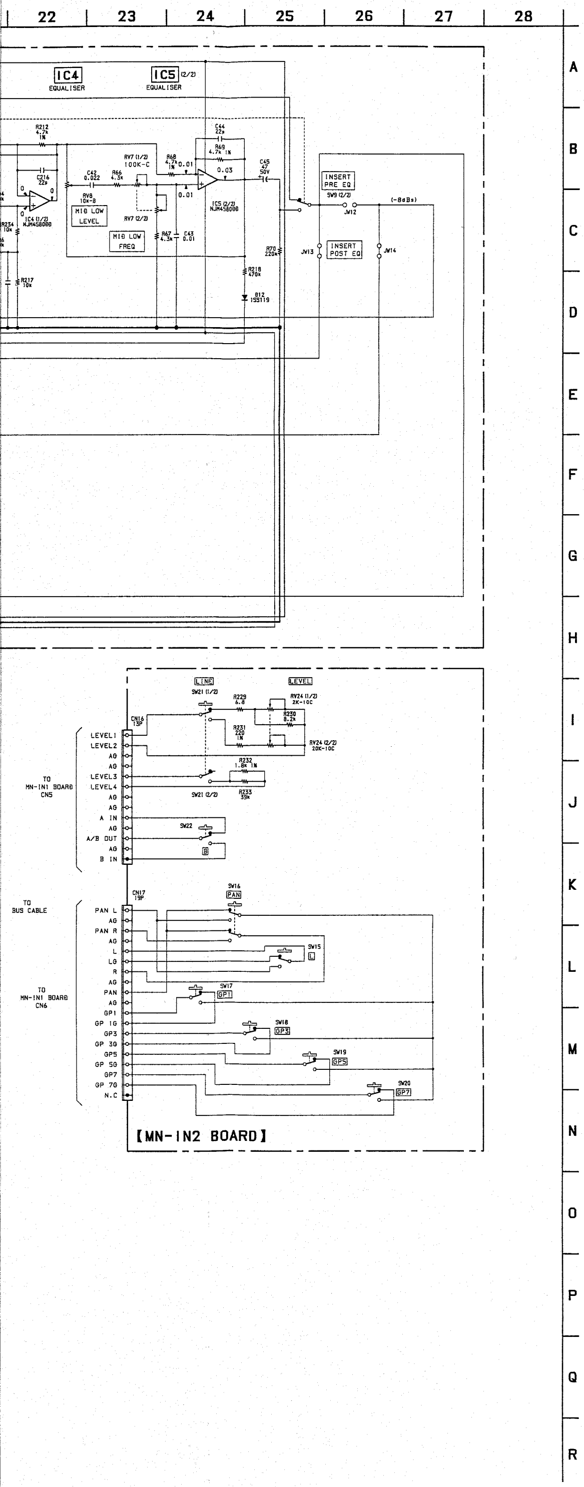


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
【MN-IN1 BOARD】
INPUT A
(+4~-26dBs)
(-20~-60dBs)
CN10
L1 60μH
L2 60μH
C1 47p
C2 47p
R135 47k
+48V
SW6
R1 6.8k 1%
R2 6.8k 1%
C5 47 63V
C6 47 63V
R33 10k 1%
D1 RD22ES
D2 RD22ES
D3 RD22ES
D4 RD22ES
R4 47k
R5 47k
R6 10
R7 10
Q1 2SC2545E
Q2 2SC2545E
Q3 2SC1815
Q4 2SC1815
Q5 2SC2545E
Q6 2SC2545E
D23 1SS119
D24 1SS119
D25 RD5.1ES
D26 RD5.1ES
R8 27k
R9 27k
R12 470
R13 470
R14 1k 1%
R15 1k 1%
R16 1k 1%
R17 1k 1%
R18 220 1%
R19 220 1%
IC1 (2/2) NJM4580DD
IC1 (1/2) NJM4580DD
IC2 (2/2) NJM4580DD
IC2 (1/2) NJM4580DD
R205 470k
R206 3.6k 1%
R207 3.6k 1%
D10 1SS119
R208 3.6k 1%
R209 3.6k 1%
R26 3.6k 1%
C18 22p
C15 22p
C16 22p
C19 22p
R22 5.6k 1%
R23 5.6k 1%
R27 3.6k 1%
R28 220k
C17 3300 6.3V
C20 47 50V
(-8dBs)
Q1-6 PRE AMP
IC1 PRE AMP
IC2 PRE AMP
R219 470k
D13 1SS119
SW8 (1/2)
C21 0.12
LCF FREQ
RV3 (1/2) 50K-C
R100 220k
CN5 13P
LEVEL 1
LEVEL 2
AG
LEVEL 3
LEVEL 4
A IN
A/B OUT
B IN
TO MN-IN2 BOARD CN16
CN7 (1/2)
INPUT B
(+4/-10dBs)
L3 60μH
L4 60μH
C24 47p
C25 47p
R35 220k
R36 220k
R37 12k 1%
R38 12k 1%
R39 2.2k 1%
R40 2.2k 1%
R41 180 1%
R42 180 1%
(+4dBs)
(-10dBs)
SW23
INPUT B LEVEL
C26 47 50V
C27 47 50V
R43 3k 1%
C28 22p
R44 3k 1%
C29 22p
C30 47 50V
R45 220k
CN9
D19 1SS119
RY1 (2/3)
IC6 (2/2) FADER AMP
R222 470k
CN15 4P
10K-10A
R133 56 1/4W
R78 1k 1%
R79 1k 1%
IC6 (2/2) NJM4580DD
C54 220 35V
(+1dBs)
RY1 (1/3)
C49 47 50V
(-18dBs)
Q7 2SC2545E FADER AMP
Q8 2SC2545E FADER AMP
R80 100
R81 1.8k 1%
R83 1k 1%
R84 220k
R76 47k
C71 470p
R223 130 1%
R224 4.7k
C53 10p
C222 470 25V
L LEVEL ADJ
PAN
RV1 (1/3) 5K-B
R86 3.3k
IC7 PAN
R85 1.5k
C55 220 35V
RV20 470-B
IC7 (2/2) NJM4580DD
RV1 (2/3) 5K-B
R LEVEL ADJ
IC9 (1/2) PAN THRU AMP
R88 1.5k
R89 3.3k
RV21 470-B
IC7 (1/2) NJM4580DD
CN3 13P
PRE FADE
PRE FADE RTN
POST FADE RTN
POST FADE
PEAK DET
SIG DET
PFL CONT
ON/OFF CONT
+17V
AG
-17V
D12V
DG
TO AUX BOARD CN2
C64 47 50V
JW16
AUX PRE PFL PRE EQ
AUX PRE PFL POST EQ
JW17
IC6 (1/2) INVERTER AUX AMP (PRE FADER)
R94 4.7k 1%
R95 4.7k 1%
IC6 (1/2) NJM4580DD
R92 4.7k 1%
R225 18k
R91 4.7k 1%
IC9 (1/2) NJM4580DD
D.OUT PRE EQ (-8dBs)
JW20 (-8dBs)
JW21 (+1dBs)
D.OUT POST FADER (+1dBs)
IC5 (1/2) BUFFER
IC5 (1/2) NJM4580DD
DIRECT OUT
CN8 (2/2)
R102 22
D20 RD22ES
D21 RD22ES
C70 220 35V
R101 220k
R97 5.1k 1%
IC9 (2/2) NJM4580DD
RY1 (3/3)
D22 1SS119
C223 47 50V
R226 4.7k
Q14 2SC1815 RELAY DRIVER
R227 82 1/4W
R113 470k
Q12 DTC144ES PFL SW DRIVER
R228 100k
Q13 2SK362 PFL SW
D9 1SS119
B+
B-
05


10
11
12
13
14
15
16
17
18
19
20
21
22
23
B+
IC2 (2/2) NJM4580DD
Q1-6 PRE AMP
IC1 PRE AMP
IC2 PRE AMP
IC3 (1/2) INVERTER
NOR
SW7 (1/2)
INV
IC3 (2/2) LOW-PASS FILTER
IC4 EQUALISER
LCF
SW8 (1/2)
LCF FREQ
RV3 (1/2) 50K-C
RV3 (2/2) 100K-C
INSERT POST EQ
INSERT PRE EQ
EQ
SW9 (1/2)
MID HIGH LEVEL
MID HIGH FREQ
HIGH LEVEL
LOW LEVEL
MID LOW LEVEL
MID LOW FREQ
B-
CN7 (2/2)
INSERT OUT
IC8 (2/2) NJM4580DD
CN8 (1/2)
INSERT IN
IC8 BUFFER
IC8 (1/2) NJM4580DD
(-8dBs)
PAN
RV1 (1/2) 5K-B
L LEVEL ADJ
IC7 PAN
IC7 (2/2) NJM4580DD
R LEVEL ADJ
RV1 (2/2) 5K-B
IC9 (1/2) PAN THRU AMP
IC7 (1/2) NJM4580DD
(-1dBs)
IC9 (1/2) NJM4580DD
IC9 (2/2) NJM4580DD
IC9 (2/2) AUX AMP (POST FADER)
CN4
N.C
AG
AUX 8G
AUX 8
AUX 7G
AUX 7
AUX 6G
AUX 6
AUX 5G
AUX 5
AUX 4G
AUX 4
AUX 3G
AUX 3
AUX 2G
AUX 2
AUX 1G
AUX 1
R124 4.7k 1%
R125 4.7k 1%
R126 4.7k 1%
R127 4.7k 1%
R128 4.7k 1%
R129 4.7k 1%
R130 4.7k 1%
R131 4.7k 1%
CN6
PAN L
PAN R
L
LG
R
PAN
GP1
GP 1G
GP3
GP 3G
GP5
GP 5G
GP7
GP 7G
N.C
SW1
SW2 GP2
SW3 GP4
SW4 GP6
SW5 GP8
CN1 50P
RG
GP 2
GP 4
GP 6
GP 8
PFL L
PFL R
+17V
-17V
B12V
BG
+48V
TO MN-IN1 BOARD CN5
LEVEL1
LEVEL2
LEVEL3
LEVEL4
A IN
A/B OUT
B IN
TO BUS CABLE
TO MN-IN1 BOARD CN6
Q15 2SK362 PFL SW
Q13 2SK362 PFL SW
Q12 DTC144ES PFL SW DRIVER
D9 1SS119
C224 220 63V
R204 390 1/4W
R203 4.7 1/4W
C201 1000 25V
R201 4.7 1/4W
C202 1000 25V
R202 4.7 1/4W


6
7
8
9
10
11
12
13
14
15
16
17
18
IC1
PRE AMP
IC2
PRE AMP
Q1-6
PRE AMP
IC3 (1/2)
INVERTER
IC3 (2/2)
LOW-PASS FILTER
NOR
INV
SW7 (1/2)
SW7 (2/2)
LCF
LCF FREQ
INSERT POST EQ
INSERT PRE EQ
EQ
MID HIGH LEVEL
MID HIGH FREQ
INSERT OUT
INSERT IN
CN7 (2/2)
CN8 (1/2)
IC8
BUFFER
INPUT B LEVEL
SW23
IC6 (2/2)
FADER AMP
IC6 (1/2)
INVERTER AUX AMP (PRE FADER)
IC7
PAN
IC9 (1/2)
PAN THRU AMP
IC9 (2/2)
AUX AMP (POST FADER)
IC5 (1/2)
BUFFER
L LEVEL ADJ
R LEVEL ADJ
AUX PRE PFL PRE EQ
AUX PRE PFL POST EQ
D.OUT PRE EQ (-8dBs)
D.OUT POST FADER (+1dBs)
CN4
CN6
N.C
AG
AUX 8G
AUX 8
AUX 7G
AUX 7
AUX 6G
AUX 6
AUX 5G
AUX 5
AUX 4G
AUX 4
AUX 3G
AUX 3
AUX 2G
AUX 2
AUX 1G
AUX 1
PAN L
PAN R
L
LG
R
PAN
GP1
GP 1G
GP3
GP 3G
GP5
GP 5G
GP7
GP 7G
SW1
SW2
SW3
SW4
SW5
GP2
GP4
GP6
GP8
RY1 (2/3)
RY1 (1/3)
RY1 (3/3)
Q14 2SC1815 RELAY DRIVER
Q12 DTC144ES PFL SW DRIVER
Q13 2SK362 PFL SW
Q15 2SK362 PFL SW
B+
B-


16
17
18
19
20
21
22
23
24
25
26
27
28
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
B+
B−
IC3 (1/2) INVERTER
IC3 (2/2) LOW-PASS FILTER
IC4 EQUALISER
IC5 (2/2) EQUALISER
NOR
INV
SW7 (1/2)
SW7 (2/2)
EQ
SW9 (1/2)
SW9 (2/2)
IC3 (1/2) NJM4580DD
IC4 (2/2) NJM4580DD
IC4 (1/2) NJM4580DD
IC5 (2/2) NJM4580DD
IC8 (1/2) NJM4580DD
(−8dBs)
MID HIGH LEVEL
MID HIGH TREQ
HIGH LEVEL
LOW LEVEL
MID LOW LEVEL
MID LOW FREQ
INSERT PRE EQ
INSERT POST EQ
JW6
JW12
JW13
JW14
17.8
17.6
0.02
0.03
0.01
CN4
CN1 50P
N.C
AG
AUX 8G
AUX 8
AUX 7G
AUX 7
AUX 6G
AUX 6
AUX 5G
AUX 5
AUX 4G
AUX 4
AUX 3G
AUX 3
AUX 2G
AUX 2
AUX 1G
AUX 1
L
LG
R
RG
GP 1
GP 1G
GP 2
GP 2G
GP 3
GP 3G
GP 4
GP 4G
GP 5
GP 5G
GP 6
GP 6G
GP 7
GP 7G
GP 8
GP 8G
PFL L
+17V
PFL R
−17V
B12V
BG
+48V
R124 4.7k 1%
R125 4.7k 1%
R126 4.7k 1%
R127 4.7k 1%
R128 4.7k 1%
R129 4.7k 1%
R130 4.7k 1%
R131 4.7k 1%
R114 4.7k 1%
R115 4.7k 1%
R116 4.7k 1%
R117 4.7k 1%
R118 4.7k 1%
R119 4.7k 1%
R120 4.7k 1%
R121 4.7k 1%
R122 4.7k 1%
R123 4.7k 1%
SW1 R
SW2 GP2
SW3 GP4
SW4 GP6
SW5 GP8
R132 4.7k 1%
R134 4.7k 1%
C224 220 63V
R204 390 1/4W
R203 4.7 1/4W
C201 1000 25V
R201 4.7 1/4W
C202 1000 25V
R202 4.7 1/4W
TO MN-IN1 BOARD CN5
TO BUS CABLE
TO MN-IN1 BOARD CN6
CN16 13P
LEVEL1
LEVEL2
LEVEL3
LEVEL4
A IN
A/B OUT
B IN
LINE
LEVEL
SW21 (1/2)
SW21 (2/2)
SW22
B
R229 6.8
RV24 (1/2) 2K-10C
RV24 (2/2) 20K-10C
R230 8.2k
R231 220 1%
R232 1.8k 1%
R233 39k
CN17 19P
PAN L
PAN R
PAN
GP1
GP 1G
GP3
GP 3G
GP5
GP 5G
GP7
GP 7G
SW16 PAN
SW15 L
SW17 GP1
SW18 GP3
SW19 GP5
SW20 GP7
[MN-IN2 BOARD]


22
23
24
25
26
27
28
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
IC4
EQUALISER
IC5 (2/2)
EQUALISER
R212 4.7k 1N
C216 22p
IC4 (1/2) NJM4580DD
R234 10k
R217 10k
C42 0.022
R66 4.3k
RV7 (1/2) 100K-C
RV8 10k-B
MID LOW LEVEL
RV7 (2/2)
MID LOW FREQ
R68 4.7k 1N
0.01
C44 22p
R69 4.7k 1N
0.03
IC5 (2/2) NJM4580DD
R67 4.3k
C43 0.01
C45 47 50V
INSERT PRE EQ
SW9 (2/2)
JW12
(-8dBs)
R70 220k
JW13
INSERT POST EQ
JW14
R218 470k
D12 1SS119
LINE
LEVEL
SW21 (1/2)
R229 6.8
RV24 (1/2) 2K-10C
R230 8.2k
R231 220 1N
RV24 (2/2) 20K-10C
CN16 13P
LEVEL1
LEVEL2
AG
AG
LEVEL3
LEVEL4
AG
AG
A IN
AG
A/B OUT
AG
B IN
R232 1.8k 1N
SW21 (2/2)
R233 39k
SW22
B
TO MN-IN1 BOARD CN5
TO BUS CABLE
TO MN-IN1 BOARD CN6
CN17 19P
SW16
PAN
PAN L
AG
PAN R
AG
L
LG
R
AG
PAN
AG
GP1
GP 1G
GP3
GP 3G
GP5
GP 5G
GP7
GP 7G
N.C
SW15
L
SW17
GP1
SW18
GP3
SW19
GP5
SW20
GP7
【MN-IN2 BOARD】

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹⁄₄ W or less unless otherwise specified.
- -∿∿- : fusible resistor.
- ☐ : panel designation.
- B+ : B+ Line.
- B− : B- Line.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

回路図ノート
- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは，その耐圧を省略。単位はすべてμF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- -∿∿- ：ヒューズ抵抗。
- ☐ ：パネル表示名称。
- B＋ ：B＋ライン。
- B－ ：B－ライン。

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

• ST-IN BOARD Location

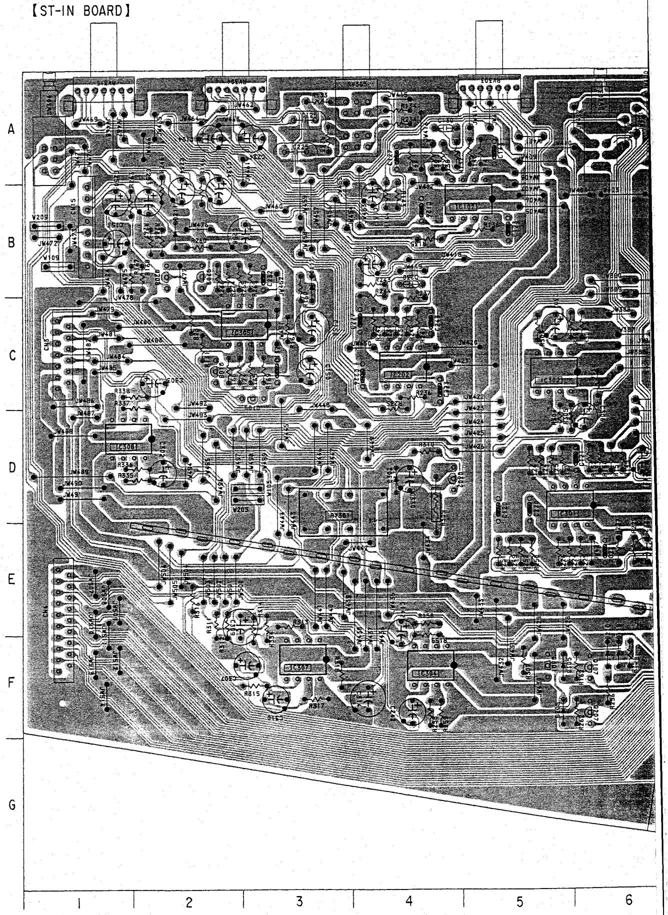
Ref. No.	Location	Ref. No.	Location
CN1	G-8	IC101	C-10
CN3	C-1	IC102	B-5
CN4	E-1	IC201	D-8
CN9	G-11	IC202	C-4
CN15	B-1	IC301	D-5
CN101	C-12	IC302	C-5
CN201	D-12	IC303	F-11
CN301	F-12	IC304	F-4
		IC305	C-3
D101	B-12	IC306	B-8
D102	B-12	IC307	F-3
D103	C-11	IC308	D-1
D104	C-12		
D105	F-5	Q101	C-10
D106	C-11	Q102	C-10
D107	D-11	Q103	C-10
D108	D-9	Q104	D-10
D109	D-9	Q105	D-10
D110	F-6	Q106	D-10
D111	B-3	Q107	F-6
D112	F-12	Q108	C-2
D113	F-12	Q109	C-3
D201	D-11	Q201	C-9
D202	D-11	Q202	C-9
D203	E-12	Q203	C-9
D204	E-12	Q204	E-8
D205	F-5	Q205	E-8
D210	F-6	Q206	D-8
D211	B-2	Q207	F-6
D212	G-12	Q208	B-2
D213	G-12	Q209	B-2
D302	D-4	Q301	F-5
D303	C-10	Q302	D-4
D304	D-10		
D305	C-9		
D306	E-8		

Note on Printed Wiring Board:
- ○—— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

プリント図ノート
- ○—— : 部品面側取付のリード線。
- ▨ : 見ている面側のパターン。

3-24. PRINTED WIRING BOARD – ST-IN Board –

3-24. プリント図ー ST-IN 基板ー



3-24. PRINTED WIRING BOARD – ST-IN Board –

3-24. プリント図ー ST-IN 基板ー

• ST-IN BOARD Location

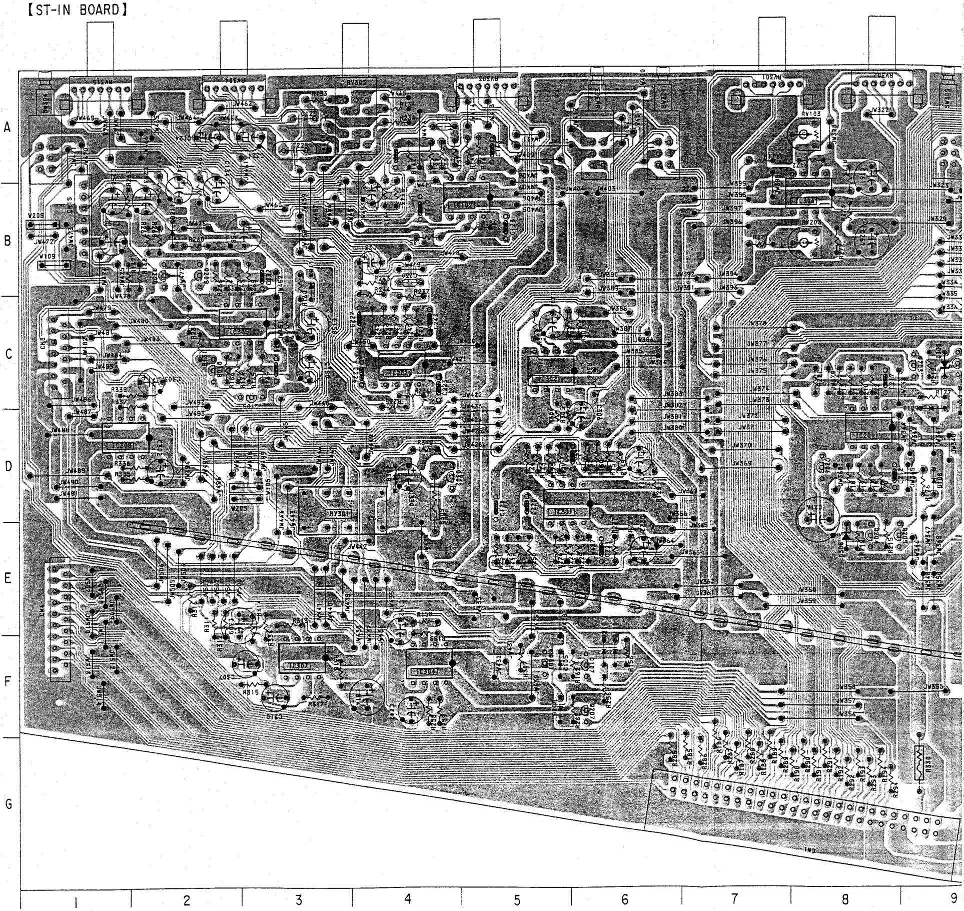
Ref. No.	Location	Ref. No.	Location
CN1	G-8	IC101	C-10
CN3	C-1	IC102	B-5
CN4	E-1	IC201	D-8
CN9	G-11	IC202	C-4
CN15	B-1	IC301	D-5
CN101	C-12	IC302	C-5
CN201	D-12	IC303	F-11
CN301	F-12	IC304	F-4
		IC305	C-3
D101	B-12	IC306	B-8
D102	B-12	IC307	F-3
D103	C-11	IC308	D-1
D104	C-12		
D105	F-5	Q101	C-10
D106	C-11	Q102	C-10
D107	D-11	Q103	C-10
D108	D-9	Q104	D-10
D109	D-9	Q105	D-10
D110	F-6	Q106	D-10
D111	B-3	Q107	F-6
D112	F-12	Q108	C-2
D113	F-12	Q109	C-3
D201	D-11	Q201	C-9
D202	D-11	Q202	C-9
D203	E-12	Q203	C-9
D204	E-12	Q204	E-8
D205	F-5	Q205	E-8
D210	F-6	Q206	D-8
D211	B-2	Q207	F-6
D212	G-12	Q208	B-2
D213	G-12	Q209	B-2
D302	D-4	Q301	F-5
D303	C-10	Q302	D-4
D304	D-10		
D305	C-9		
D306	E-8		

Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

プリント図ノート

- ○——：部品面側取付のリード線。
- ▨：見ている面側のパターン。


【ST-IN BOARD】
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
IC102
IC202
IC301
IC302
IC304
IC305
IC306
IC307
IC308
RV301
CN3
CN4
CN15
CN9

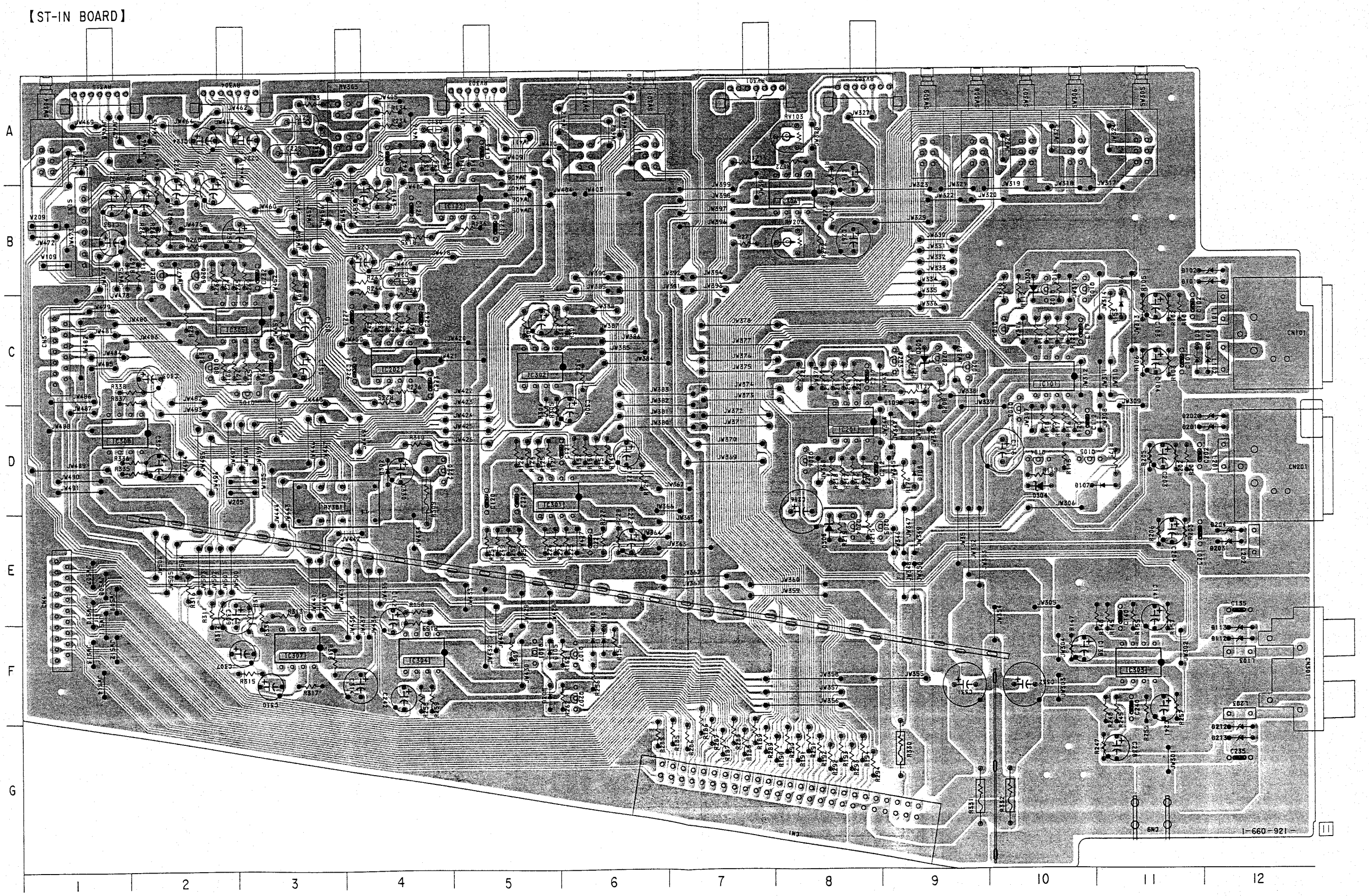
3-24. PRINTED WIRING BOARD – ST-IN Board –

3-24. プリント図ー ST-IN 基板ー

ation

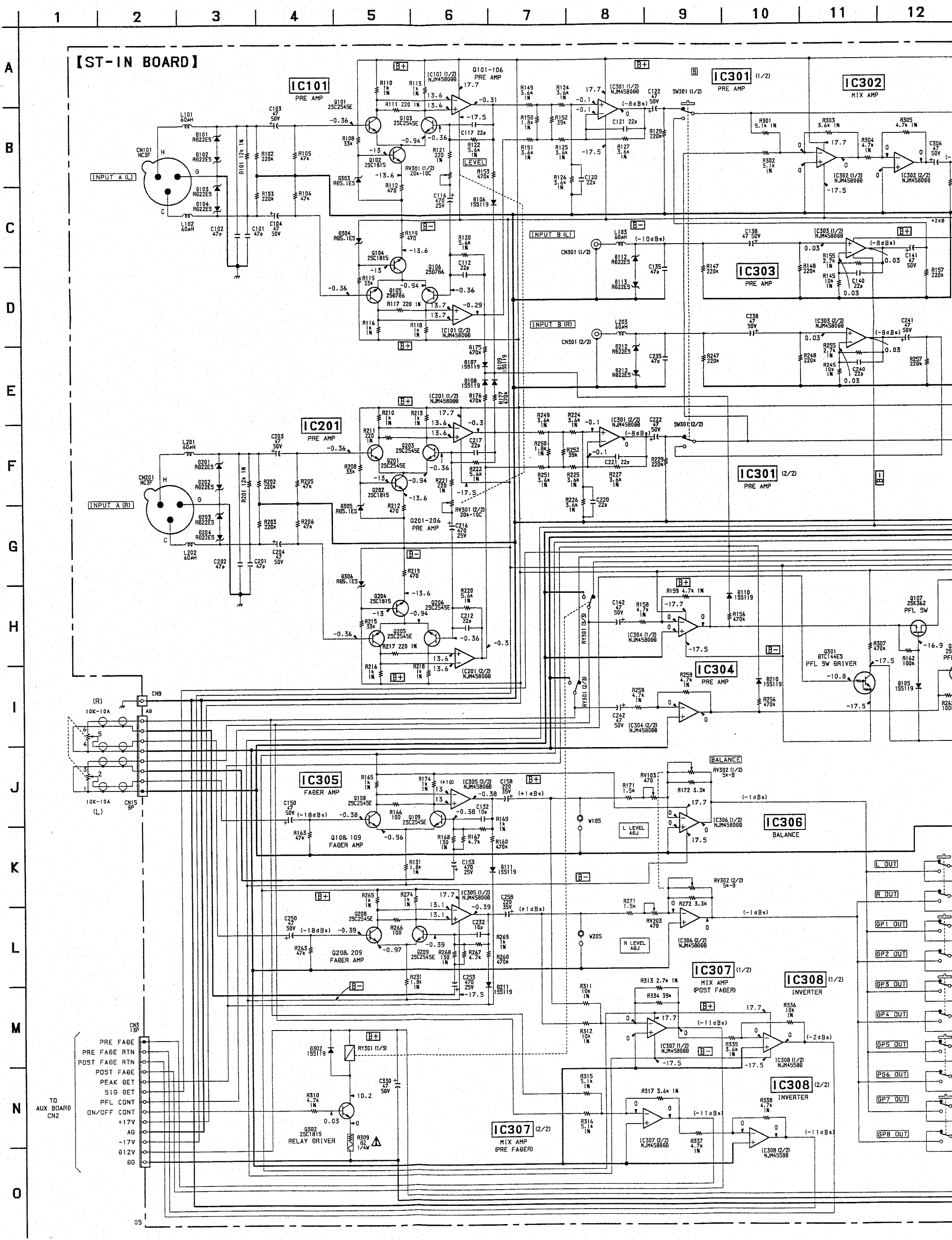
Ref. No.	Location
IC101	C-10
IC102	B-5
IC201	D-8
IC202	C-4
IC301	D-5
IC302	C-5
IC303	F-11
IC304	F-4
IC305	C-3
IC306	B-8
IC307	F-3
IC308	D-1
Q101	C-10
Q102	C-10
Q103	C-10
Q104	D-10
Q105	D-10
Q106	D-10
Q107	F-6
Q108	C-2
Q109	C-3
Q201	C-9
Q202	C-9
Q203	C-9
Q204	E-8
Q205	E-8
Q206	D-8
Q207	F-6
Q208	B-2
Q209	B-2
Q301	F-5
Q302	D-4

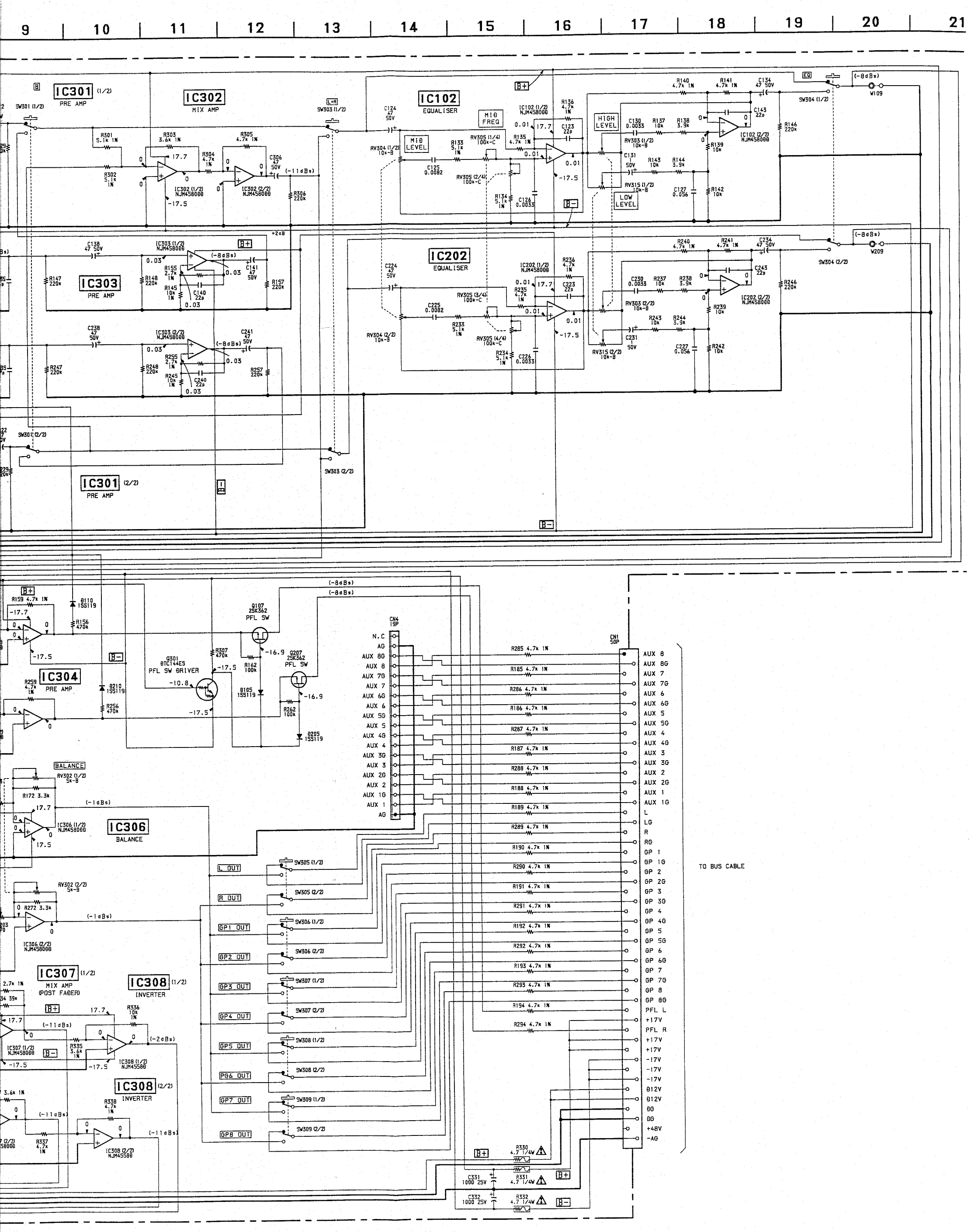
the component side.
e which enables seeing.


【ST-IN BOARD】
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11
12
CN101
CN201
1-660-921-
11

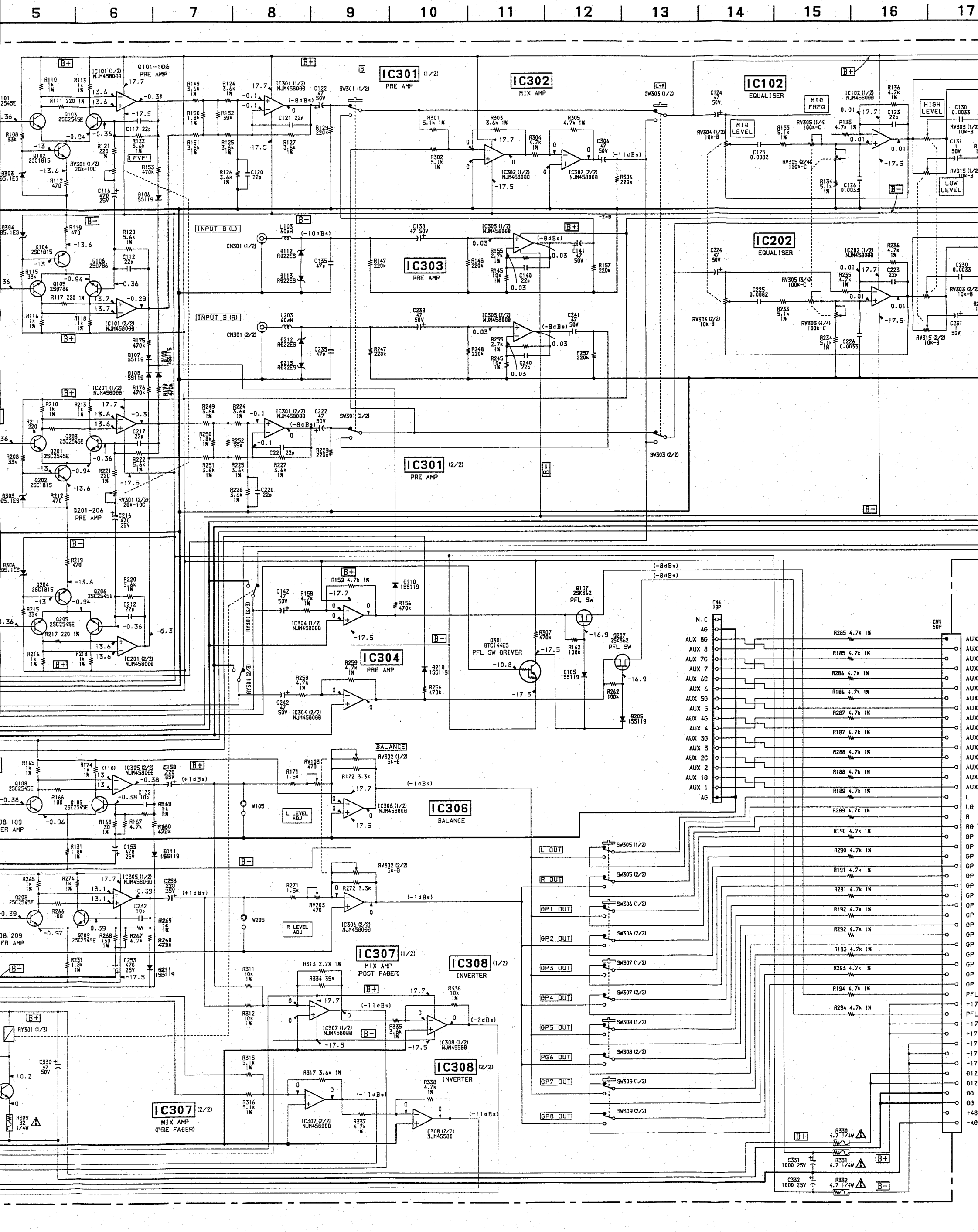
3-25. SCHEMATIC DIAGRAM – ST-IN Board –

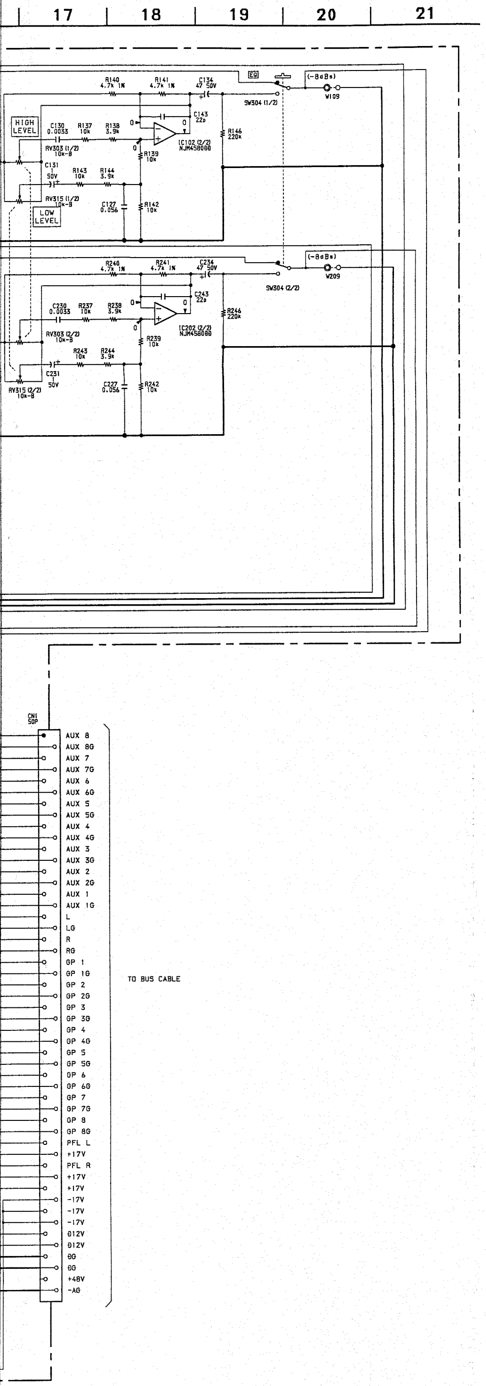
3-25. 回路図ー ST-IN 基板ー


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
【ST-IN BOARD】
IC101
PRE AMP
Q101-106
PRE AMP
IC101 (1/2) NJM4580DD
IC101 (2/2) NJM4580DD
LEVEL
RV301 (1/2) 20k-10C
RV301 (2/2) 20k-10C
INPUT A (L)
INPUT A (R)
CN101 NC3F
CN201 NC3F
IC201
PRE AMP
IC201 (1/2) NJM4580DD
IC201 (2/2) NJM4580DD
Q201-206
PRE AMP
IC301 (1/2)
PRE AMP
IC301 (2/2)
PRE AMP
SW301 (1/2)
SW301 (2/2)
IC302
MIX AMP
IC302 (1/2) NJM4580DD
IC302 (2/2) NJM4580DD
INPUT B (L)
INPUT B (R)
CN301 (1/2)
CN301 (2/2)
IC303
PRE AMP
IC303 (1/2) NJM4580DD
IC303 (2/2) NJM4580DD
(-8dBs)
(-10dBs)
IC304
PRE AMP
IC304 (1/2) NJM4580DD
IC304 (2/2) NJM4580DD
RY301 (3/3)
RY301 (2/3)
Q107 2SK362
PFL SW
Q301 DTC144ES
PFL SW DRIVER
IC305
FADER AMP
IC305 (1/2) NJM4580DD
IC305 (2/2) NJM4580DD
Q108, 109
FADER AMP
Q208, 209
FADER AMP
(-18dBs)
(+1dBs)
(-1dBs)
BALANCE
RV302 (1/2) 5k-B
RV302 (2/2) 5k-B
RV103 470
RV203 470
L LEVEL ADJ
R LEVEL ADJ
IC306
BALANCE
IC306 (1/2) NJM4580DD
IC306 (2/2) NJM4580DD
IC307 (1/2)
MIX AMP
(POST FADER)
IC307 (2/2)
MIX AMP
(PRE FADER)
IC308 (1/2)
INVERTER
IC308 (2/2)
INVERTER
(-11dBs)
(-2dBs)
L OUT
R OUT
GP1 OUT
GP2 OUT
GP3 OUT
GP4 OUT
GP5 OUT
GP6 OUT
GP7 OUT
GP8 OUT
RY301 (1/3)
Q302 2SC1815
RELAY DRIVER
R309 82 1/4W
CN9
CN15 8P
10K-10A
(R)
(L)
CN3 13P
PRE FADE
PRE FADE RTN
POST FADE RTN
POST FADE
PEAK DET
SIG DET
PFL CONT
ON/OFF CONT
+17V
AG
-17V
D12V
DG
TO AUX BOARD CN2
B+
B-
+24B
05



9
10
11
12
13
14
15
16
17
18
19
20
21
IC301 (1/2) PRE AMP
SW301 (1/2)
IC302 MIX AMP
SW303 (1/2)
L+R
IC102 EQUALISER
MID FREQ
MID LEVEL
HIGH LEVEL
LOW LEVEL
EQ
SW304 (1/2)
W109
(-8dBs)
R140 4.7k 1%
R141 4.7k 1%
C134 47 50V
C143 22p
R146 220k
IC102 (2/2) NJM4580DD
R301 5.1k 1%
R302 5.1k 1%
R303 3.6k 1%
R304 4.7k 1%
R305 4.7k 1%
C306 47 50V
(-11dBs)
R306 220k
IC302 (1/2) NJM4580DD
IC302 (2/2) NJM4580DD
17.7
-17.5
C124 47 50V
RV304 (1/2) 10k-B
R133 5.1k 1%
C125 0.0082
RV305 (1/4) 100k-C
RV305 (2/4) 100k-C
R134 5.1k 1%
C126 0.0033
R135 4.7k 1%
R136 4.7k 1%
C123 22p
IC102 (1/2) NJM4580DD
C130 0.0033
R137 10k
R138 3.9k
RV303 (1/2) 10k-B
C131 1 50V
R143 10k
R144 3.9k
RV315 (1/2) 10k-B
C127 0.056
R142 10k
R139 10k
B+
B-
IC303 PRE AMP
C138 47 50V
IC303 (1/2) NJM4580DD
R147 220k
R148 220k
R155 2.7k 1%
R145 10k 1%
C140 22p
C141 47 50V
R157 220k
+2dB
(-8dBs)
C238 47 50V
IC303 (2/2) NJM4580DD
R247 220k
R248 220k
R255 2.7k 1%
R245 10k 1%
C240 22p
C241 47 50V
R257 220k
IC202 EQUALISER
C224 47 50V
C225 0.0082
R233 5.1k 1%
RV304 (2/2) 10k-B
RV305 (3/4) 100k-C
RV305 (4/4) 100k-C
R234 5.1k 1%
C226 0.0033
R235 4.7k 1%
R236 4.7k 1%
C223 22p
IC202 (1/2) NJM4580DD
R240 4.7k 1%
R241 4.7k 1%
C234 47 50V
C243 22p
C230 0.0033
R237 10k
R238 3.9k
RV303 (2/2) 10k-B
R243 10k
R244 3.9k
C231 1 50V
RV315 (2/2) 10k-B
C227 0.056
R242 10k
R239 10k
R246 220k
IC202 (2/2) NJM4580DD
SW304 (2/2)
W209
SW301 (2/2)
SW303 (2/2)
IC301 (2/2) PRE AMP
R159 4.7k 1%
D110 1SS119
R156 470k
IC304 PRE AMP
R259 4.7k 1%
D210 1SS119
R256 470k
Q301 DTC144ES PFL SW DRIVER
R307 470k
-10.8
Q107 2SK362 PFL SW
R162 100k
D105 1SS119
-16.9
Q207 2SK362 PFL SW
R262 100k
D205 1SS119
BALANCE
RV302 (1/2) 5k-B
R172 3.3k
(-1dBs)
IC306 (1/2) NJM4580DD
IC306 BALANCE
RV302 (2/2) 5k-B
R272 3.3k
IC306 (2/2) NJM4580DD
IC307 (1/2) MIX AMP (POST FADER)
IC307 (1/2) NJM4580DD
IC308 (1/2) INVERTER
R336 10k 1%
R335 3.6k 1%
(-2dBs)
IC308 (1/2) NJM4558D
IC308 (2/2) INVERTER
R338 4.7k 1%
R337 4.7k 1%
IC308 (2/2) NJM4558D
L OUT
R OUT
GP1 OUT
GP2 OUT
GP3 OUT
GP4 OUT
GP5 OUT
PG6 OUT
GP7 OUT
GP8 OUT
SW305 (1/2)
SW305 (2/2)
SW306 (1/2)
SW306 (2/2)
SW307 (1/2)
SW307 (2/2)
SW308 (1/2)
SW308 (2/2)
SW309 (1/2)
SW309 (2/2)
CN4 15P
N.C
AG
AUX 8G
AUX 8
AUX 7G
AUX 7
AUX 6G
AUX 6
AUX 5G
AUX 5
AUX 4G
AUX 4
AUX 3G
AUX 3
AUX 2G
AUX 2
AUX 1G
AUX 1
R285 4.7k 1%
R185 4.7k 1%
R286 4.7k 1%
R186 4.7k 1%
R287 4.7k 1%
R187 4.7k 1%
R288 4.7k 1%
R188 4.7k 1%
R189 4.7k 1%
R289 4.7k 1%
R190 4.7k 1%
R290 4.7k 1%
R191 4.7k 1%
R291 4.7k 1%
R192 4.7k 1%
R292 4.7k 1%
R193 4.7k 1%
R293 4.7k 1%
R194 4.7k 1%
R294 4.7k 1%
CN1 50P
L
LG
R
RG
GP 1
GP 1G
GP 2
GP 2G
GP 3
GP 3G
GP 4
GP 4G
GP 5
GP 5G
GP 6
GP 6G
GP 7
GP 7G
GP 8
GP 8G
PFL L
+17V
PFL R
+17V
+17V
-17V
-17V
-17V
D12V
D12V
DG
DG
+48V
-AG
TO BUS CABLE
R330 4.7 1/4W
R331 4.7 1/4W
R332 4.7 1/4W
C331 1000 25V
C332 1000 25V


5
6
7
8
9
10
11
12
13
14
15
16
17
IC301 (1/2)
PRE AMP
IC302
MIX AMP
IC102
EQUALISER
IC303
PRE AMP
IC202
EQUALISER
IC301 (2/2)
PRE AMP
IC304
PRE AMP
IC306
BALANCE
IC307 (1/2)
MIX AMP
(POST FADER)
IC308 (1/2)
INVERTER
IC308 (2/2)
INVERTER
IC307 (2/2)
MIX AMP
(PRE FADER)
Q101-106
PRE AMP
Q201-206
PRE AMP
INPUT B (L)
INPUT B (R)
CN301 (1/2)
CN301 (2/2)
SW301 (1/2)
SW301 (2/2)
SW303 (1/2)
SW303 (2/2)
LEVEL
MID LEVEL
MID FREQ
HIGH LEVEL
LOW LEVEL
BALANCE
L LEVEL ADJ
R LEVEL ADJ
Q107 2SK362 PFL SW
Q207 2SK362 PFL SW
Q301 DTC144ES PFL SW DRIVER
L OUT
R OUT
GP1 OUT
GP2 OUT
GP3 OUT
GP4 OUT
GP5 OUT
PG6 OUT
GP7 OUT
GP8 OUT
SW305 (1/2)
SW305 (2/2)
SW306 (1/2)
SW306 (2/2)
SW307 (1/2)
SW307 (2/2)
SW308 (1/2)
SW308 (2/2)
SW309 (1/2)
SW309 (2/2)
CN4 19P
N.C
AG
AUX 8G
AUX 8
AUX 7G
AUX 7
AUX 6G
AUX 6
AUX 5G
AUX 5
AUX 4G
AUX 4
AUX 3G
AUX 3
AUX 2G
AUX 2
AUX 1G
AUX 1
AG
CN1 50P
RY301 (1/3)
RY301 (2/3)
RY301 (3/3)
(-8dBs)
(-11dBs)
(-1dBs)
(+1dBs)
(-2dBs)
(-10dBs)
+24B


17
18
19
20
21
R140
4.7k 1%
R141
4.7k 1%
C134
47 50V
EQ
(-8dBs)
W109
SW304 (1/2)
C143
22p
HIGH
LEVEL
C130
0.0033
R137
10k
R138
3.9k
R146
220k
IC102 (2/2)
NJM4580
RV303 (1/2)
10k-B
R139
10k
C131
1
50V
R143
10k
R144
3.9k
RV315 (1/2)
10k-B
C127
0.056
R142
10k
LOW
LEVEL
R240
4.7k 1%
R241
4.7k 1%
C234
47 50V
(-8dBs)
W209
SW304 (2/2)
C243
22p
C230
0.0033
R237
10k
R238
3.9k
R246
220k
IC202 (2/2)
NJM4580
RV303 (2/2)
10k-B
R239
10k
R243
10k
R244
3.9k
C231
1
50V
RV315 (2/2)
10k-B
C227
0.056
R242
10k
CN1
50P
AUX 8
AUX 8G
AUX 7
AUX 7G
AUX 6
AUX 6G
AUX 5
AUX 5G
AUX 4
AUX 4G
AUX 3
AUX 3G
AUX 2
AUX 2G
AUX 1
AUX 1G
L
LG
R
RG
GP 1
GP 1G
GP 2
GP 2G
GP 3
GP 3G
GP 4
GP 4G
GP 5
GP 5G
GP 6
GP 6G
GP 7
GP 7G
GP 8
GP 8G
PFL L
+17V
PFL R
+17V
+17V
-17V
-17V
-17V
012V
012V
0G
0G
+48V
-AG
TO BUS CABLE

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⊣∿∿⊢ : fusible resistor.
- ▭ : panel designation.
- B+ : B+ Line.
- B- : B- Line.

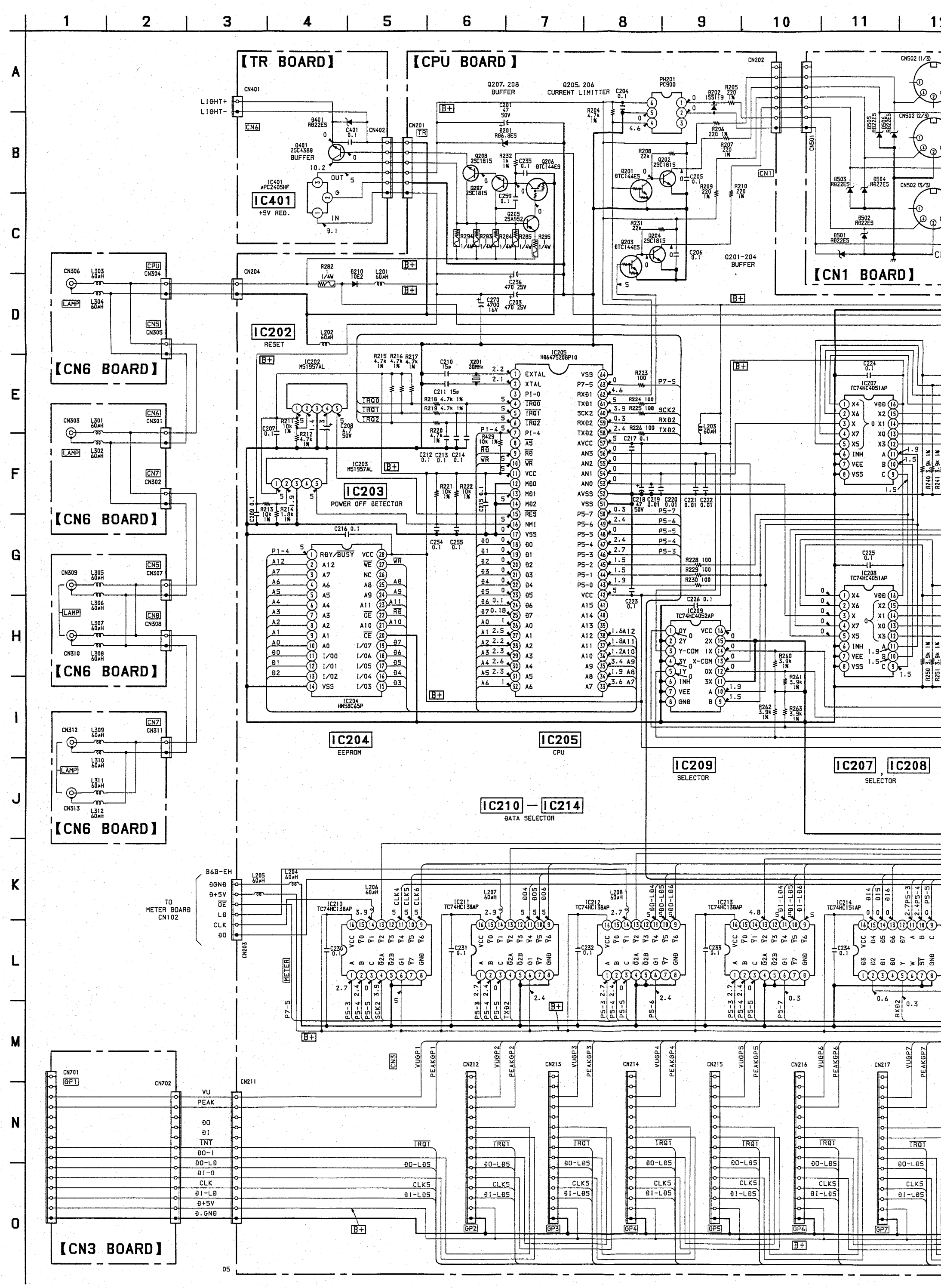
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

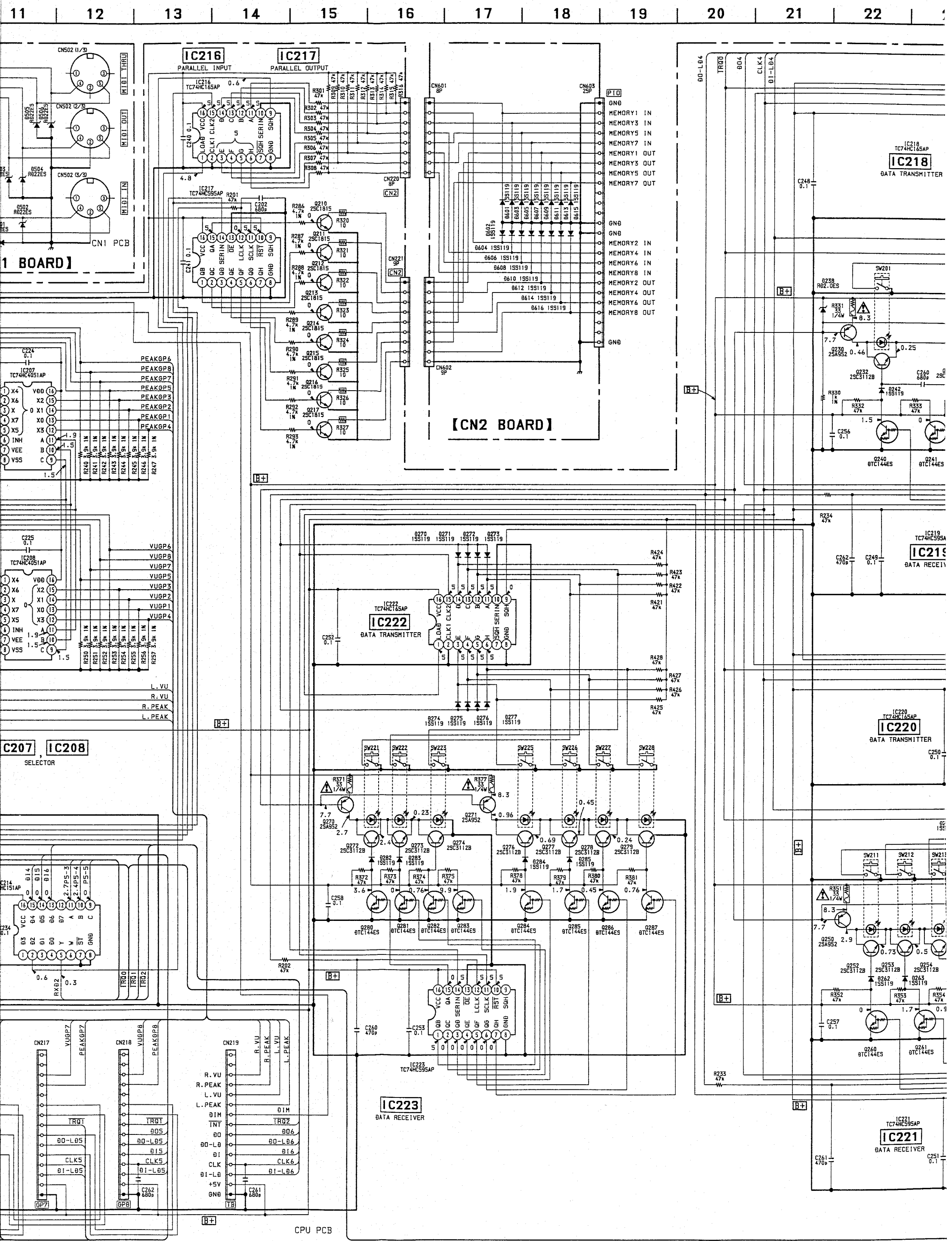
回路図ノート
- ケミコン、タンタルを除くコンデンサで、耐圧50V以下のものは、その耐圧を省略。単位はすべてμF（pはpF)。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- %は許容差を示す。
- ⊣∿∿⊢：ヒューズ抵抗。
- ▭ ：パネル表示名称。
- B+ ：B＋ライン。
- B- ：B－ライン。

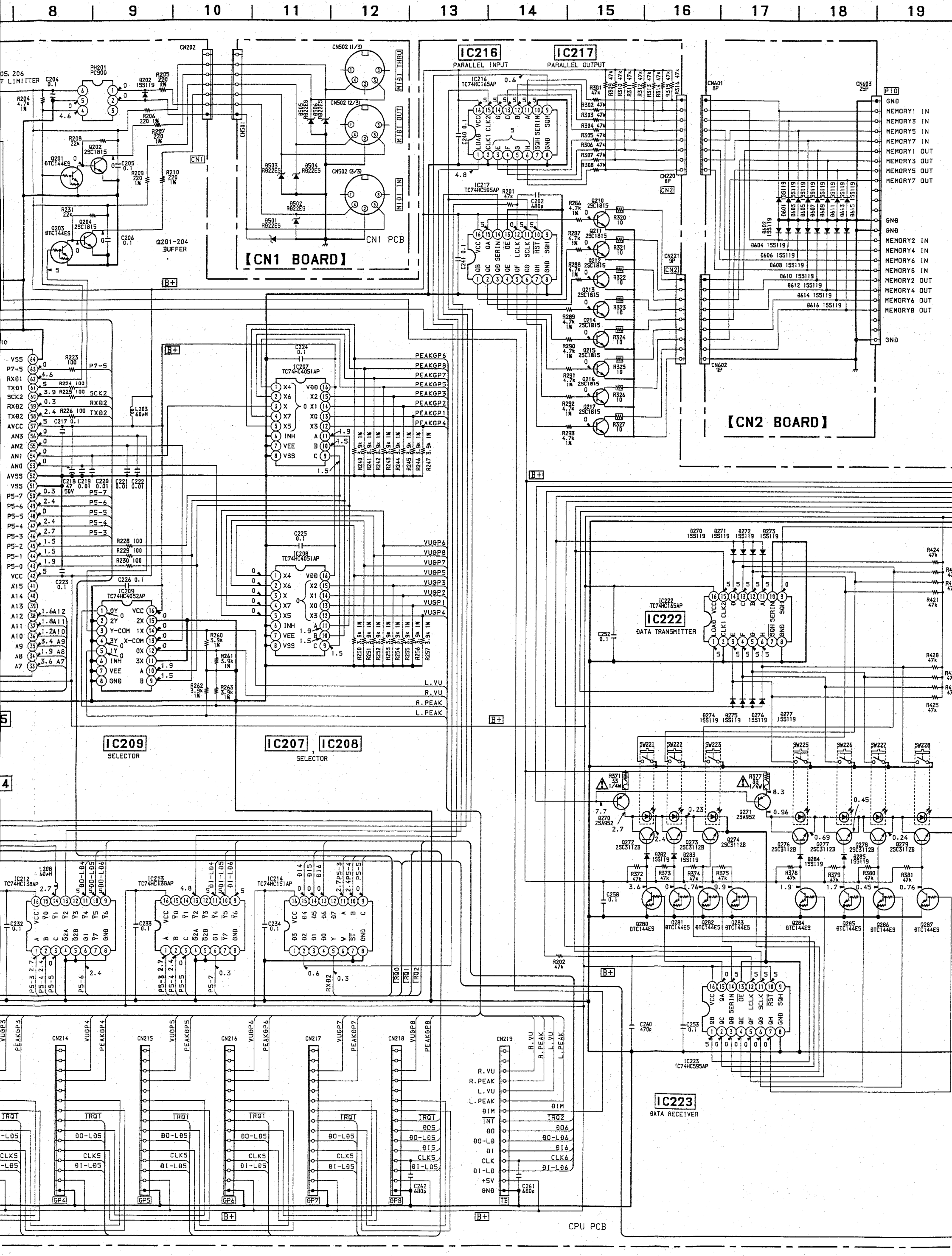
⚠印の部品、または⚠印付きの点線で囲まれた部品は、安全性を維持するために、重要な部品です。
従って交換時は、必ず指定の部品を使用して下さい。

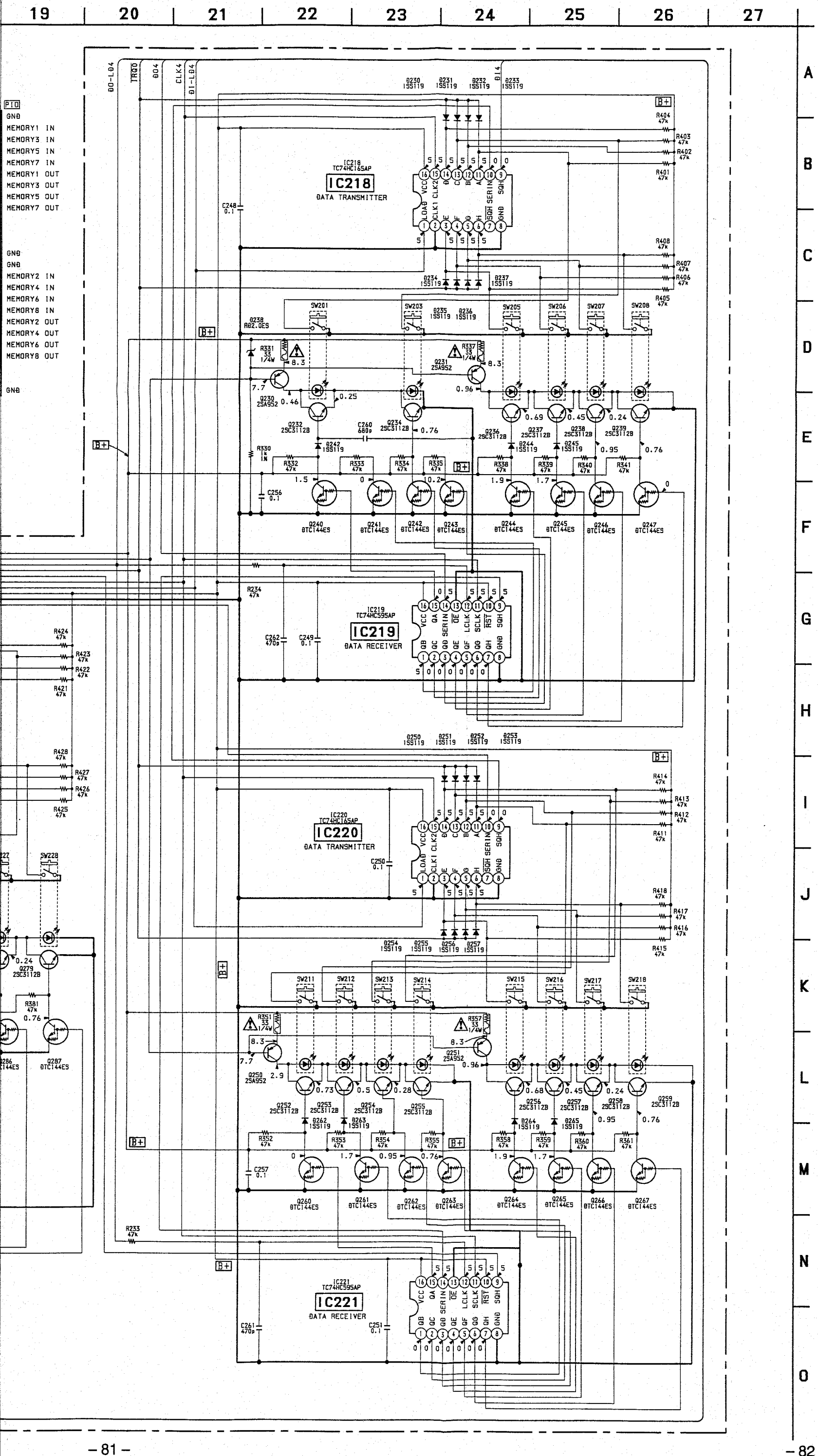
3-26. SCHEMATIC DIAGRAM – CPU Board –

3-26. 回路図ー CPU 基板部ー


【TR BOARD】
【CPU BOARD】
【CN6 BOARD】
【CN3 BOARD】
【CN1 BOARD】
IC401
+5V REG.
IC202
RESET
IC203
POWER OFF DETECTOR
IC204
EEPROM
IC205
CPU
IC209
SELECTOR
IC207 , IC208
SELECTOR
IC210 – IC214
DATA SELECTOR
Q207, 208 BUFFER
Q205, 206 CURRENT LIMITTER
Q201-204 BUFFER
Q401 2SC4388 BUFFER
IC205 H8647520BP10
IC204 HN58C65P
IC202 M51957AL
IC203 M51957AL
IC209 TC74HC4052AP
IC207 TC74HC4051AP
IC208 TC74HC4051AP
IC210 TC74HC138AP
IC211 TC74HC138AP
IC212 TC74HC138AP
IC213 TC74HC138AP
IC214 TC74HC151AP
TO METER BOARD CN102
LIGHT+
LIGHT-
VU
PEAK
B+
05


11
12
13
14
15
16
17
18
19
20
21
22
CN502 (1/3)
MIDI THRU
CN502 (2/3)
MIDI OUT
CN502 (3/3)
MIDI IN
CN1 PCB
1 BOARD】
IC216
PARALLEL INPUT
IC217
PARALLEL OUTPUT
IC216 TC74HC165AP
IC217 TC74HC595AP
CN220 8P
CN2
CN221 9P
CN601 8P
CN602 9P
CN603 25P
PIO
GND
MEMORY1 IN
MEMORY3 IN
MEMORY5 IN
MEMORY7 IN
MEMORY1 OUT
MEMORY3 OUT
MEMORY5 OUT
MEMORY7 OUT
MEMORY2 IN
MEMORY4 IN
MEMORY6 IN
MEMORY8 IN
MEMORY2 OUT
MEMORY4 OUT
MEMORY6 OUT
MEMORY8 OUT
【CN2 BOARD】
IC207 TC74HC4051AP
IC208 TC74HC4051AP
PEAKGP6
PEAKGP8
PEAKGP7
PEAKGP5
PEAKGP3
PEAKGP2
PEAKGP1
PEAKGP4
VUGP6
VUGP8
VUGP7
VUGP5
VUGP3
VUGP2
VUGP1
VUGP4
L.VU
R.VU
R.PEAK
L.PEAK
IC207, IC208
SELECTOR
IC222 TC74HC165AP
IC222
DATA TRANSMITTER
IC223 TC74HC595AP
IC223
DATA RECEIVER
IC214 TC74HC151AP
CN217
CN218
CN219
GP7
GP8
TB
CPU PCB
IC218 TC74HC165AP
IC218
DATA TRANSMITTER
IC219 TC74HC595AP
DATA RECEIVER
IC220 TC74HC165AP
IC220
DATA TRANSMITTER
IC221 TC74HC595AP
IC221
DATA RECEIVER
SW201
SW221
SW222
SW223
SW225
SW226
SW227
SW228
SW211
SW212
B+


8
9
10
11
12
13
14
15
16
17
18
19
IC216
PARALLEL INPUT
IC216 TC74HC165AP
IC217
PARALLEL OUTPUT
IC217 TC74HC595AP
CN202
CN501
CN502 (1/3)
CN502 (2/3)
CN502 (3/3)
MIDI THRU
MIDI OUT
MIDI IN
CN1 PCB
【CN1 BOARD】
PH201 PC900
Q201 DTC144ES
Q202 2SC1815
Q203 DTC144ES
Q204 2SC1815
Q201-204 BUFFER
D501 RD22ES
D502 RD22ES
D503 RD22ES
D504 RD22ES
D505 RD22ES
D506 RD22ES
CN220 6P
CN221 9P
CN601 8P
CN602 9P
CN603 25P
P10
GND
MEMORY1 IN
MEMORY3 IN
MEMORY5 IN
MEMORY7 IN
MEMORY1 OUT
MEMORY3 OUT
MEMORY5 OUT
MEMORY7 OUT
GND
GND
MEMORY2 IN
MEMORY4 IN
MEMORY6 IN
MEMORY8 IN
MEMORY2 OUT
MEMORY4 OUT
MEMORY6 OUT
MEMORY8 OUT
GND
【CN2 BOARD】
Q210 2SC1815
Q211 2SC1815
Q212 2SC1815
Q213 2SC1815
Q214 2SC1815
Q215 2SC1815
Q216 2SC1815
Q217 2SC1815
IC207 TC74HC4051AP
IC208 TC74HC4051AP
IC209 TC74HC4052AP
PEAKGP6
PEAKGP8
PEAKGP7
PEAKGP5
PEAKGP3
PEAKGP2
PEAKGP1
PEAKGP4
VUGP6
VUGP8
VUGP7
VUGP5
VUGP3
VUGP2
VUGP1
VUGP4
L.VU
R.VU
R.PEAK
L.PEAK
IC209
SELECTOR
IC207 , IC208
SELECTOR
VSS
P7-5
RXD1
TXD1
SCK2
RXD2
TXD2
AVCC
AN3
AN2
AN1
AN0
AVSS
VSS
P5-7
P5-6
P5-5
P5-4
P5-3
P5-2
P5-1
P5-0
VCC
A15
A14
A13
A12
A11
A10
A9
A8
A7
L203 60μH
L208 60μH
IC212 TC74HC138AP
IC213 TC74HC138AP
IC214 TC74HC151AP
IC222 TC74HC165AP
IC222
DATA TRANSMITTER
IC223 TC74HC595AP
IC223
DATA RECEIVER
Q270 2SA952
Q271 2SA952
Q272 2SC3112B
Q273 2SC3112B
Q274 2SC3112B
Q276 2SC3112B
Q277 2SC3112B
Q278 2SC3112B
Q279 2SC3112B
Q280 DTC144ES
Q281 DTC144ES
Q282 DTC144ES
Q283 DTC144ES
Q284 DTC144ES
Q285 DTC144ES
Q286 DTC144ES
Q287 DTC144ES
SW221
SW222
SW223
SW225
SW226
SW227
SW228
R371 33 1/4W
R377 33 1/4W
CN214
CN215
CN216
CN217
CN218
CN219
GP4
GP5
GP6
GP7
GP8
TB
IRQ1
IRQ2
D0-L05
CLK5
D1-L05
R.VU
R.PEAK
L.VU
L.PEAK
D1M
INT
D0
D0-L0
D1
CLK
D1-L0
+5V
GND
D06
D0-L06
D16
CLK6
D1-L06
B+
CPU PCB


19
20
21
22
23
24
25
26
27
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
PIO
GND
MEMORY1 IN
MEMORY3 IN
MEMORY5 IN
MEMORY7 IN
MEMORY1 OUT
MEMORY3 OUT
MEMORY5 OUT
MEMORY7 OUT
GND
GND
MEMORY2 IN
MEMORY4 IN
MEMORY6 IN
MEMORY8 IN
MEMORY2 OUT
MEMORY4 OUT
MEMORY6 OUT
MEMORY8 OUT
GND
DO-LD4
TRGO
DO4
CLK4
DI-LD4
DI4
IC218
TC74HC165AP
IC218
DATA TRANSMITTER
IC219
TC74HC595AP
IC219
DATA RECEIVER
IC220
TC74HC165AP
IC220
DATA TRANSMITTER
IC221
TC74HC595AP
IC221
DATA RECEIVER
B+
SW201
SW203
SW205
SW206
SW207
SW208
SW211
SW212
SW213
SW214
SW215
SW216
SW217
SW218
SW228
D230 1SS119
D231 1SS119
D232 1SS119
D233 1SS119
D234 1SS119
D235 1SS119
D236 1SS119
D237 1SS119
D238 RD2.0ES
Q230 2SA952
Q231 2SA952
Q232 2SC3112B
Q234 2SC3112B
Q236 2SC3112B
Q237 2SC3112B
Q238 2SC3112B
Q239 2SC3112B
Q240 DTC144ES
Q241 DTC144ES
Q242 DTC144ES
Q243 DTC144ES
Q244 DTC144ES
Q245 DTC144ES
Q246 DTC144ES
Q247 DTC144ES
Q250 2SA952
Q251 2SA952
Q252 2SC3112B
Q253 2SC3112B
Q254 2SC3112B
Q255 2SC3112B
Q256 2SC3112B
Q257 2SC3112B
Q258 2SC3112B
Q259 2SC3112B
Q260 DTC144ES
Q261 DTC144ES
Q262 DTC144ES
Q263 DTC144ES
Q264 DTC144ES
Q265 DTC144ES
Q266 DTC144ES
Q267 DTC144ES
Q279 2SC3112B
Q286 DTC144ES
Q287 DTC144ES
D242 1SS119
D244 1SS119
D245 1SS119
D250 1SS119
D251 1SS119
D252 1SS119
D253 1SS119
D254 1SS119
D255 1SS119
D256 1SS119
D257 1SS119
D262 1SS119
D263 1SS119
D264 1SS119
D265 1SS119
R331 33 1/4W
R337 33 1/4W
R351 33 1/4W
R357 33 1/4W
R330 1k 1W
R332 47k
R333 47k
R334 47k
R335 47k
R338 47k
R339 47k
R340 47k
R341 47k
R352 47k
R353 47k
R354 47k
R355 47k
R358 47k
R359 47k
R360 47k
R361 47k
R381 47k
R401 47k
R402 47k
R403 47k
R404 47k
R405 47k
R406 47k
R407 47k
R408 47k
R411 47k
R412 47k
R413 47k
R414 47k
R415 47k
R416 47k
R417 47k
R418 47k
R421 47k
R422 47k
R423 47k
R424 47k
R425 47k
R426 47k
R427 47k
R428 47k
R233 47k
R234 47k
C248 0.1
C249 0.1
C250 0.1
C251 0.1
C256 0.1
C257 0.1
C260 680p
C261 470p
C262 470p
LOAD
CLK1
CLK2
VCC
SERIN
SQH
GND
QA
QB
QC
QD
QE
QF
QG
QH
OE
LCLK
SCLK
RST

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µ
  50 WV or less are not indicated except for electrolytics a
  tantalums.
- All resistors are in Ω and ¹/₄ W or less unless otherwi
  specified.
- : nonflammable resistor.
- : fusible resistor.
- ☐ : panel designation.
- B+ : B+ Line.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés pa une marque ⚠ sont critique pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

回路図ノート

- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは，その耐圧を省略。単位はすべてµF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- ：不燃性抵抗。
- ：ヒューズ抵抗。
- ☐ ：パネル表示名称。
- B+ ：B＋ライン。

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

Note on Schematic Diagram:

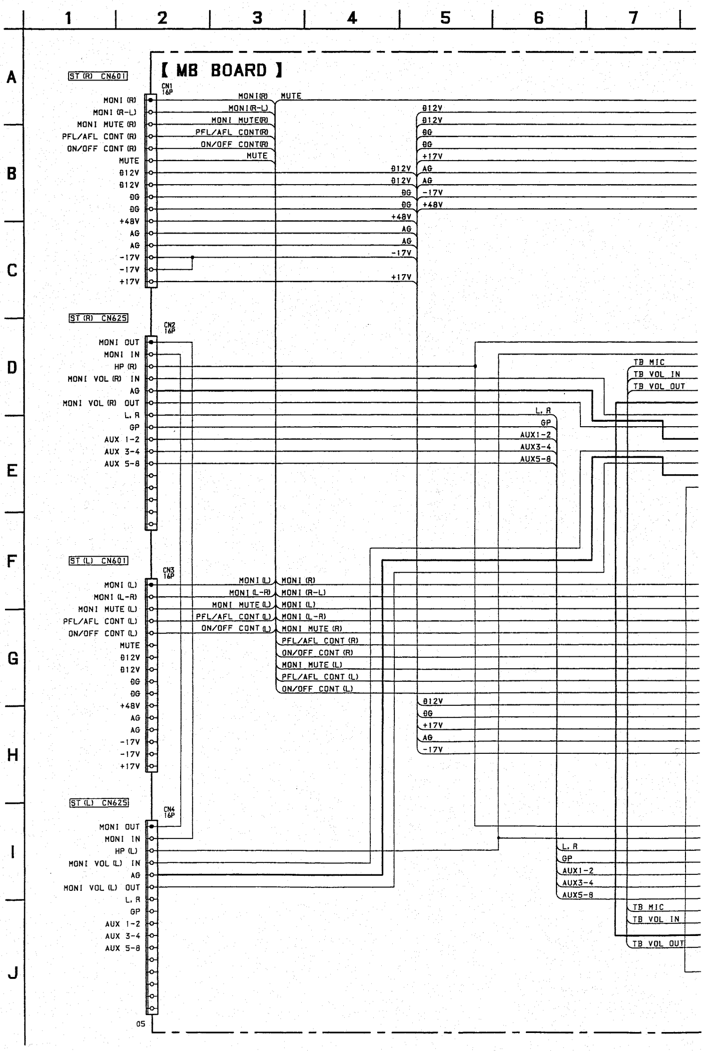
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$ W or less unless otherwise specified.
- B+ : B+ Line.
- B− : B- Line.

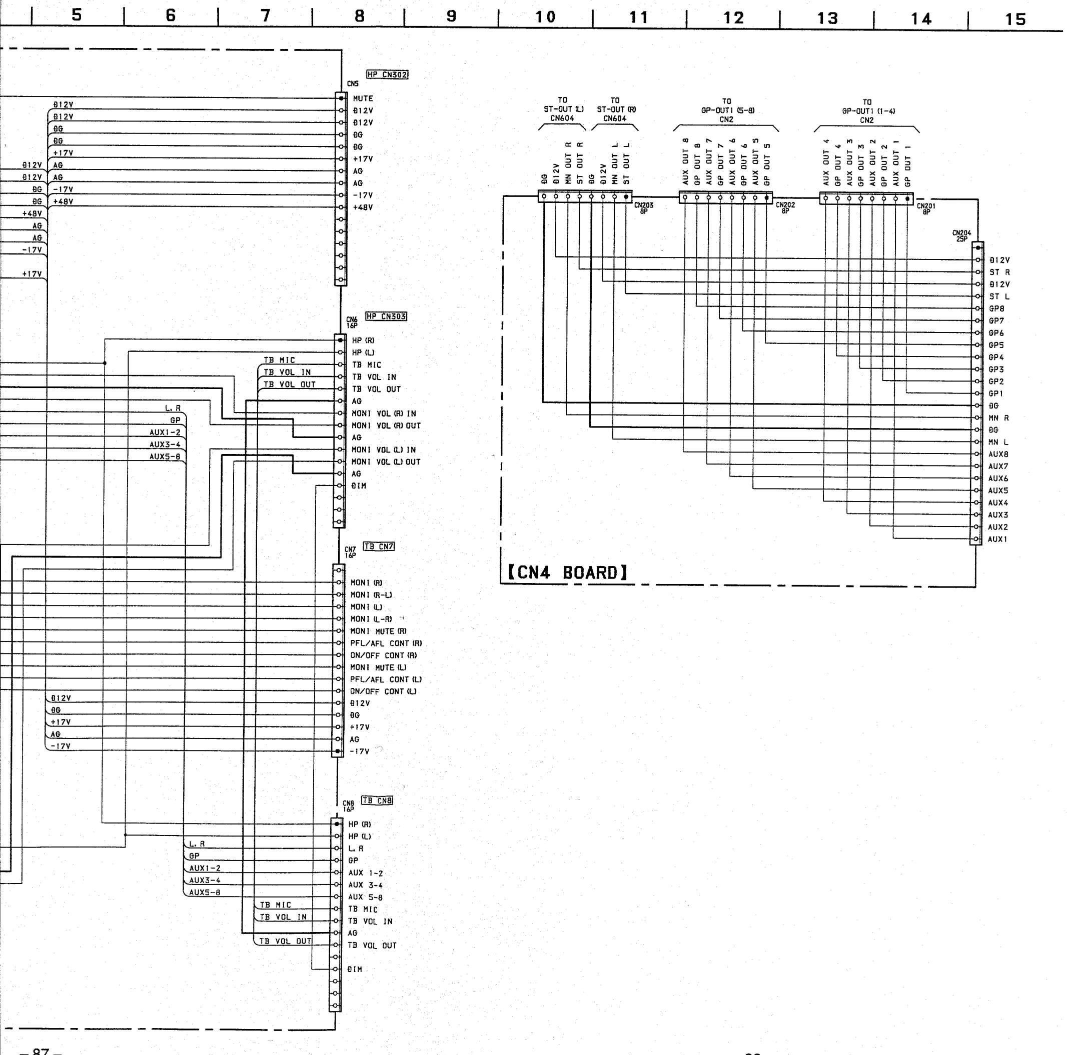
回路図ノート

- ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものは，その耐圧を省略。単位はすべてμF（pはpF）。
- 抵抗で指示のないものは1/4W以下を示す。単位はすべてΩ。
- B+ ：B＋ライン。
- B− ：B−ライン。

3-28. SCHEMATIC DIAGRAM – MB and CN4 Boards –

3-28. 回路図— MB, CN4 基板—


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
【 MB BOARD 】
ST (R) CN601
CN1 16P
MONI (R)
MONI (R-L)
MONI MUTE (R)
PFL/AFL CONT (R)
ON/OFF CONT (R)
MUTE
B12V
BG
+48V
AG
-17V
+17V
ST (R) CN625
CN2 16P
MONI OUT
MONI IN
HP (R)
MONI VOL (R) IN
MONI VOL (R) OUT
L, R
GP
AUX 1-2
AUX 3-4
AUX 5-8
ST (L) CN601
CN3 16P
MONI (L)
MONI (L-R)
MONI MUTE (L)
PFL/AFL CONT (L)
ON/OFF CONT (L)
ST (L) CN625
CN4 16P
HP (L)
MONI VOL (L) IN
MONI VOL (L) OUT
AUX1-2
AUX3-4
AUX5-8
TB MIC
TB VOL IN
TB VOL OUT
05


5
6
7
8
9
10
11
12
13
14
15
HP CN302
CN5
MUTE
Ø12V
Ø12V
ØG
ØG
+17V
AG
AG
-17V
+48V
HP CN303
CN6 16P
HP (R)
HP (L)
TB MIC
TB VOL IN
TB VOL OUT
AG
MONI VOL (R) IN
MONI VOL (R) OUT
AG
MONI VOL (L) IN
MONI VOL (L) OUT
AG
ØIM
L, R
GP
AUX1-2
AUX3-4
AUX5-8
TB CN7
CN7 16P
MONI (R)
MONI (R-L)
MONI (L)
MONI (L-R)
MONI MUTE (R)
PFL/AFL CONT (R)
ON/OFF CONT (R)
MONI MUTE (L)
PFL/AFL CONT (L)
ON/OFF CONT (L)
Ø12V
ØG
+17V
AG
-17V
TB CN8
CN8 16P
HP (R)
HP (L)
L, R
GP
AUX 1-2
AUX 3-4
AUX 5-8
TB MIC
TB VOL IN
AG
TB VOL OUT
ØIM
TO ST-OUT (L) CN604
TO ST-OUT (R) CN604
TO GP-OUT1 (5-8) CN2
TO GP-OUT1 (1-4) CN2
ØG
Ø12V
MN OUT R
ST OUT R
ØG
Ø12V
MN OUT L
ST OUT L
AUX OUT 8
GP OUT 8
AUX OUT 7
GP OUT 7
AUX OUT 6
GP OUT 6
AUX OUT 5
GP OUT 5
AUX OUT 4
GP OUT 4
AUX OUT 3
GP OUT 3
AUX OUT 2
GP OUT 2
AUX OUT 1
GP OUT 1
CN203 8P
CN202 8P
CN201 8P
CN204 25P
Ø12V
ST R
Ø12V
ST L
GP8
GP7
GP6
GP5
GP4
GP3
GP2
GP1
ØG
MN R
ØG
MN L
AUX8
AUX7
AUX6
AUX5
AUX4
AUX3
AUX2
AUX1
【CN4 BOARD】

Note on Printed Wiring Board:

- o—— : parts extracted from the component side.
- ▨ : Pattern of the rear side.
- ▩ : Pattern from the side which enables seeing.

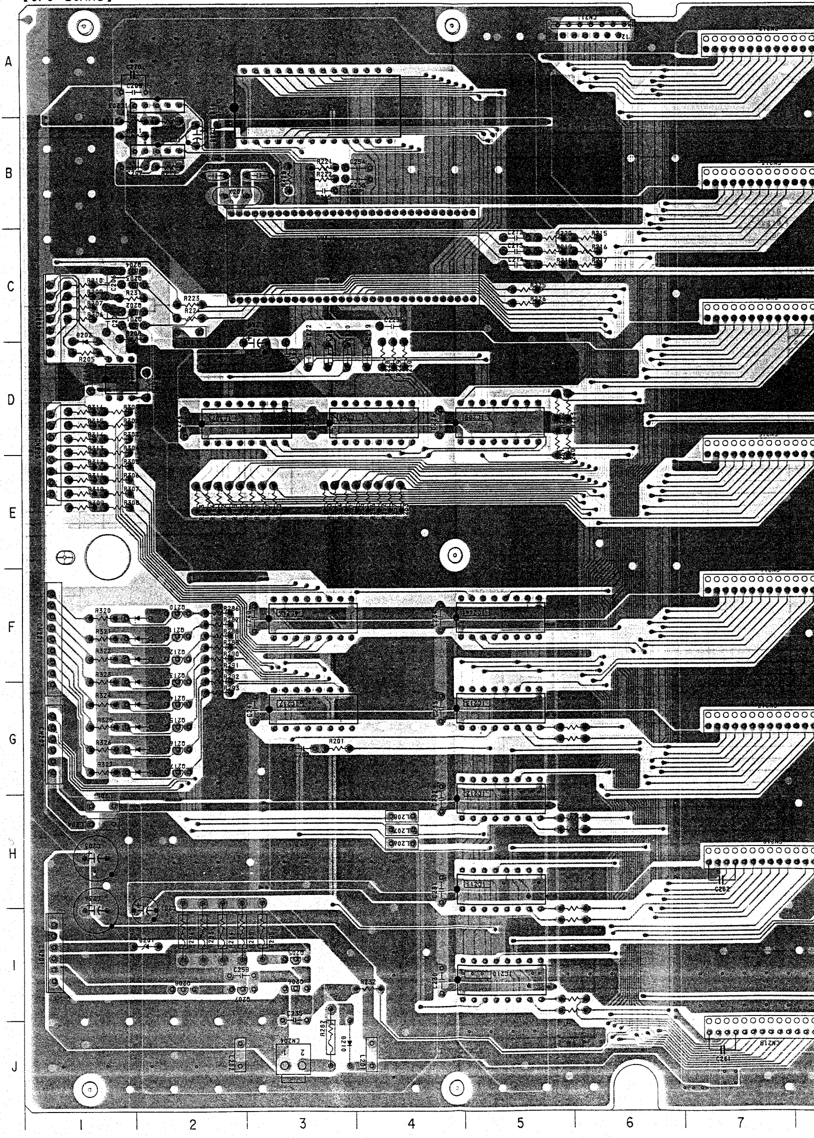
3-27. PRINTED WIRING BOARDS – CPU Board Section –

3-27. プリント図ー CPU 基板部ー

• CPU BOARD Location

Ref. No.	Location	Ref. No.	Location
CN201	I-1	IC223	B-11
CN211	A-6		
CN212	A-7	Q201	C-2
CN213	B-7	Q202	C-2
CN214	C-7	Q203	C-2
CN215	D-7	Q204	C-2
CN216	F-7	Q205	I-3
CN217	G-7	Q206	I-3
CN218	H-7	Q207	I-2
CN219	J-7	Q208	I-2
		Q210	F-2
D201	I-2	Q211	F-2
D202	D-1	Q212	F-2
D210	J-3	Q213	G-2
D230	I-8	Q214	G-2
D231	I-8	Q215	G-2
D232	I-8	Q216	G-2
D233	I-8	Q217	G-2
D234	G-8	Q230	A-8
D235	G-9	Q231	F-8
D236	H-9	Q232	B-9
D237	I-9	Q234	D-9
D238	F-9	Q236	F-9
D242	B-9	Q237	H-9
D244	G-9	Q238	I-9
D245	H-9	Q239	J-8
D250	I-11	Q240	B-9
D251	I-11	Q241	C-9
D252	I-11	Q242	D-9
D253	I-11	Q243	E-9
D254	I-11	Q244	F-9
D255	I-11	Q245	H-9
D256	I-11	Q246	I-9
D257	I-11	Q247	J-10
D262	B-10	Q250	A-10
D263	C-10	Q251	F-10
D264	G-10	Q252	B-10
D265	H-10	Q253	C-10
D270	E-11	Q254	D-10
D271	E-11	Q255	E-10
D272	E-11	Q256	F-10
D273	E-11	Q257	H-10
D274	F-11	Q258	I-10
D275	G-11	Q259	J-10
D276	G-11	Q260	B-10
D277	G-11	Q261	C-10
D282	B-12	Q262	D-10
D283	C-11	Q263	E-10
C284	G-12	Q264	G-10
D285	H-12	Q265	H-10
		Q266	I-10
IC202	B-2	Q267	J-11
IC203	A-2	Q270	A-11
IC204	A-3	Q271	F-11
IC205	C-3	Q272	B-12
IC207	D-3	Q273	C-12
IC208	D-4	Q274	D-12
IC209	D-5	Q276	F-12
IC210	I-5	Q277	H-12
IC211	H-5	Q278	I-12
IC212	H-5	Q279	J-11
IC213	G-5	Q280	B-12
IC214	F-5	Q281	C-12
IC216	F-3	Q282	D-12
IC217	G-3	Q283	E-12
IC218	I-8	Q284	F-12
IC219	D-9	Q285	H-12
IC220	I-11	Q286	I-12
IC221	D-11	Q287	J-12
IC222	G-11		

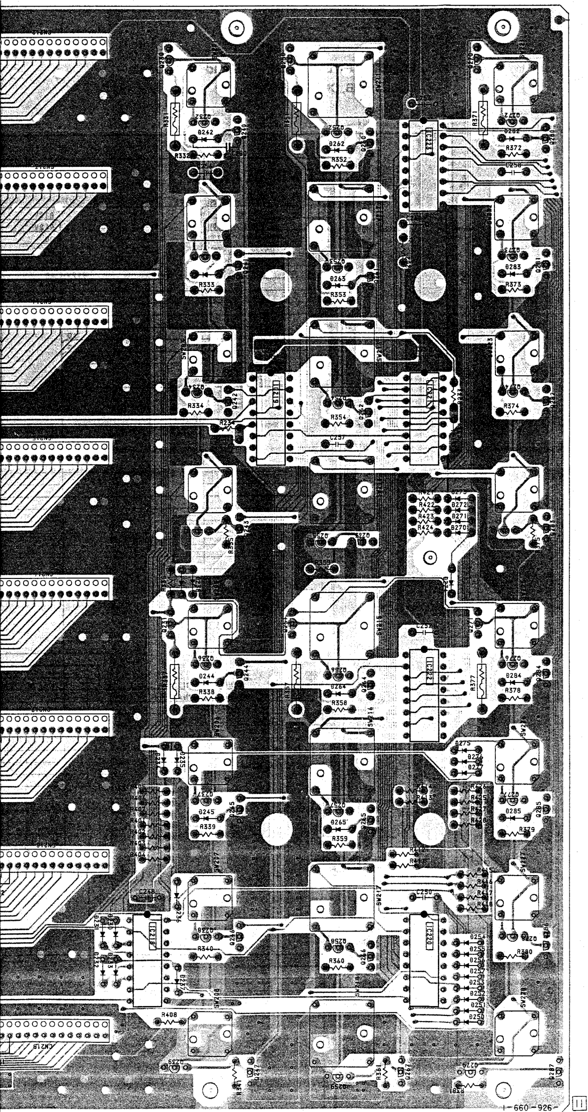
【CPU BOARD】



e.

eing.

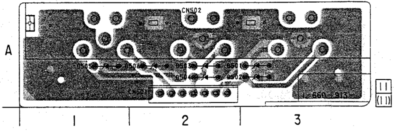
プリント図ノート
- ○—— ：部品面側取付のリード線。
- ▨ ：裏側のパターン。
- ▨ ：見ている面側のパターン。


IC221
IC222
IC219
IC220
1-660-926-
7
8
9
10
11
12

• CN1 BOARD

Ref. No.	Location
CN501	A-2
CN502	A-2
D501	A-3
D502	A-3
D503	A-2
D504	A-2
D505	A-1
D506	A-2

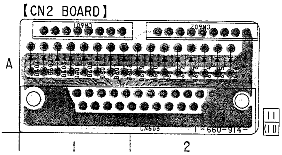
【CN1 BOARD】


CN502
A
1-660-913-
1
2
3

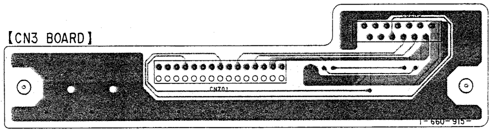
• CN2 BOARD

Ref. No.	Location
CN601	A-1
CN602	A-2
D601	A-1
D602	A-1
D603	A-1
D604	A-1
D605	A-1
D606	A-1
D607	A-1
D608	A-1
D609	A-2
D610	A-2
D611	A-2
D612	A-2
D613	A-2
D614	A-2
D615	A-2
D616	A-2

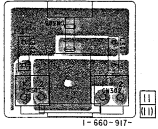
【CN2 BOARD】


CN601
CN602
A
CN603
1-660-914-
1
2

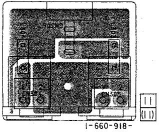
【CN3 BOARD】


CN701
1-660-915-

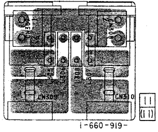
【CN5 BOARD】



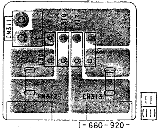
【CN6 BOARD】



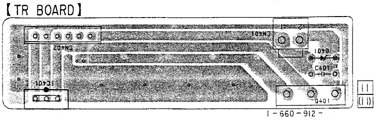
【CN7 BOARD】


CN309
CN310
1-660-919-

【CN8 BOARD】


CN311
CN312
CN313
1-660-920-

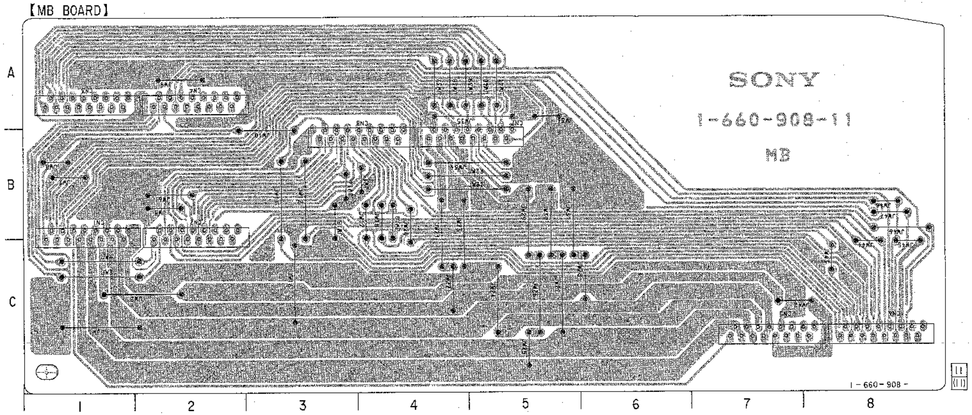
【TR BOARD】


CN401
CN402
IC401
C401
Q401
1-660-912-

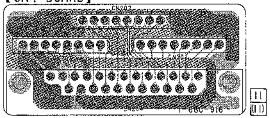
3-29. PRINTED WIRING BOARDS – MB and CN4 Boards –

3-29. プリント図ー MB, CN4 基板部ー

【MB BOARD】


A
B
C
1
2
3
4
5
6
7
8
SONY
1-660-908-11
MB
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
1-660-908-
11
(11)

【CN4 BOARD】


CN202
CN201
CN204
1-660-916
11
(11)

• MB BOARD

Ref. No.	Location
CN1	B-1
CN2	B-2
CN3	A-1
CN4	A-2
CN5	C-7
CN6	C-8
CN7	B-5
CN8	B-4

Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ▨ : Pattern of the rear side.
- ░ : Pattern from the side which enables seeing.

プリント図ノート

- ○——：部品面側取付のリード線。
- ▨：裏側のパターン。
- ░：見ている面側のパターン。

SECTION 4. EXPLODED VIEWS
4. 分解図

NOTE:

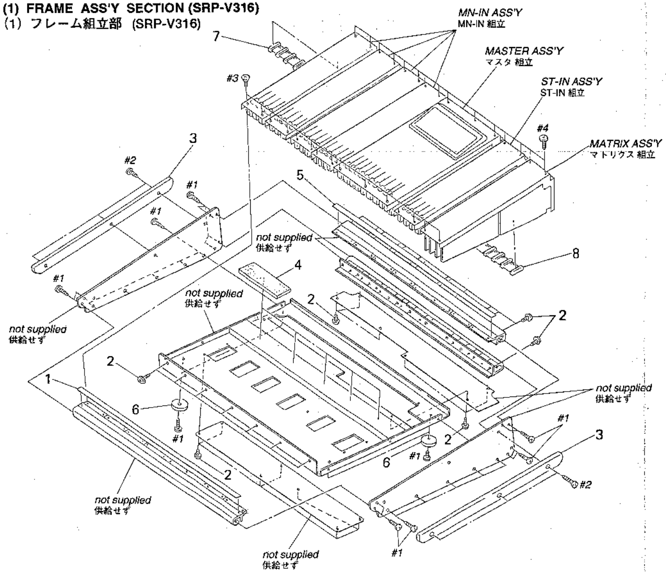
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearrance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

【使用上の注意】

•外装部品色表示
例：バランスツマミ（ホワイト）............（レッド）
↑ ↑
部品の色を表す。 セットの色を表す。

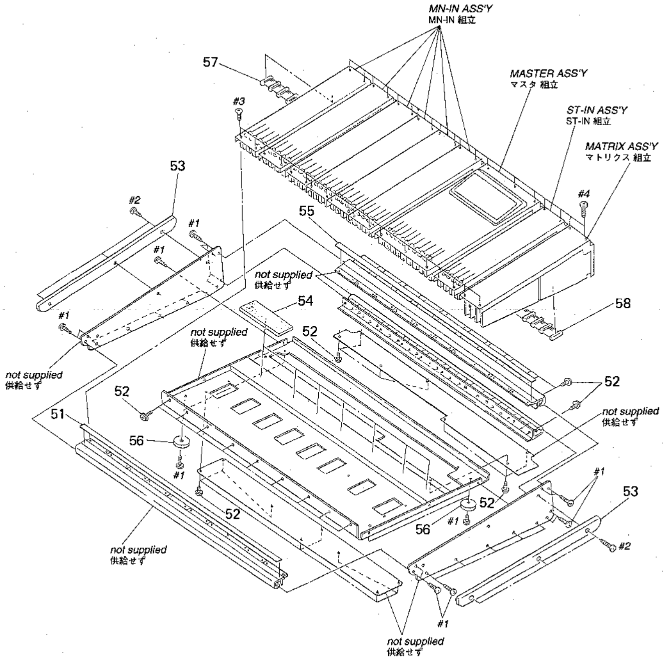
•＊印の部品は常時在庫しておりません。
•分解図中の機構部品で、図面番号のない部品は供給しません。
•-XX、-Xは標準化部品のため、セットに付いている部品と異なる場合があります。
•付属梱包部は、部品表の最後尾にあります。

(1) FRAME ASS'Y SECTION (SRP-V316)
(1) フレーム組立部 (SRP-V316)


MN-IN ASS'Y
MN-IN 組立
MASTER ASS'Y
マスタ 組立
ST-IN ASS'Y
ST-IN 組立
MATRIX ASS'Y
マトリクス 組立
7
#3
#4
8
3
#2
#1
#1
5
not supplied
供給せず
4
#1
not supplied
供給せず
not supplied
供給せず
2
2
2
1
6
#1
not supplied
供給せず
#1
2
6
#1
2
3
#2
not supplied
供給せず
not supplied
供給せず
#1

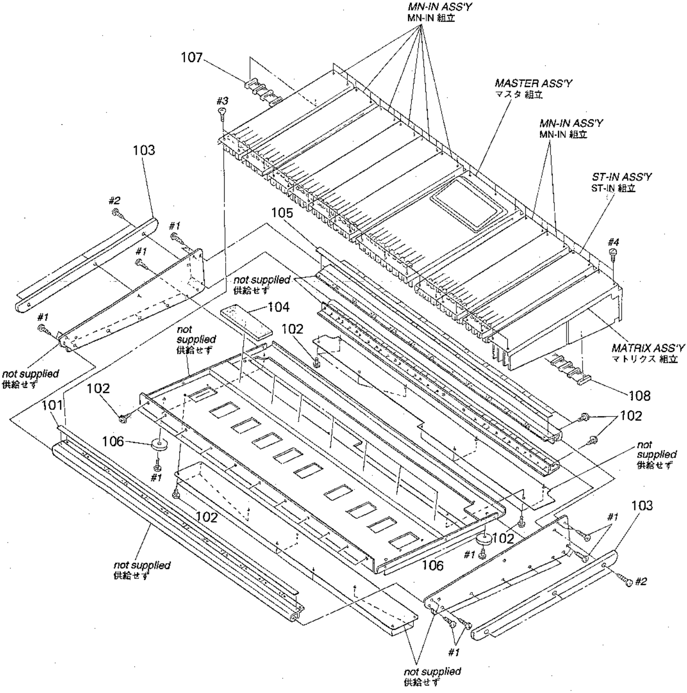
Ref. No.	Part No.	Description	Remark
* 1	2-344-823-11	PLATE (16), CHANNEL INDICATION	
2	3-704-366-01	SCREW (CASE) (M3X8)	
* 3	2-344-566-01	HANDLE	
* 4	2-344-787-01	CUSHION	
* 5	2-344-823-01	PLATE (16), CHANNEL INDICATION	
6	X-4945-465-1	FOOT ASSY	
7	1-777-452-11	CABLE (WITH CONNECTOR)	
8	1-777-067-11	CABLE (WITH CONNECTOR)	

(2) FRAM ASS'Y SECTION (SRP-V324)
(2) フレーム組立部 (SRP-V324)


MN-IN ASS'Y
MN-IN 組立
57
MASTER ASS'Y
マスタ 組立
#3
ST-IN ASS'Y
ST-IN 組立
MATRIX ASS'Y
マトリクス 組立
53
#4
#2
#1
55
#1
not supplied
供給せず
#1
58
54
not supplied
供給せず
52
not supplied
供給せず
52
52
51
not supplied
供給せず
56
#1
#1
53
52
52
56
#1
#2
not supplied
供給せず
#1
not supplied
供給せず

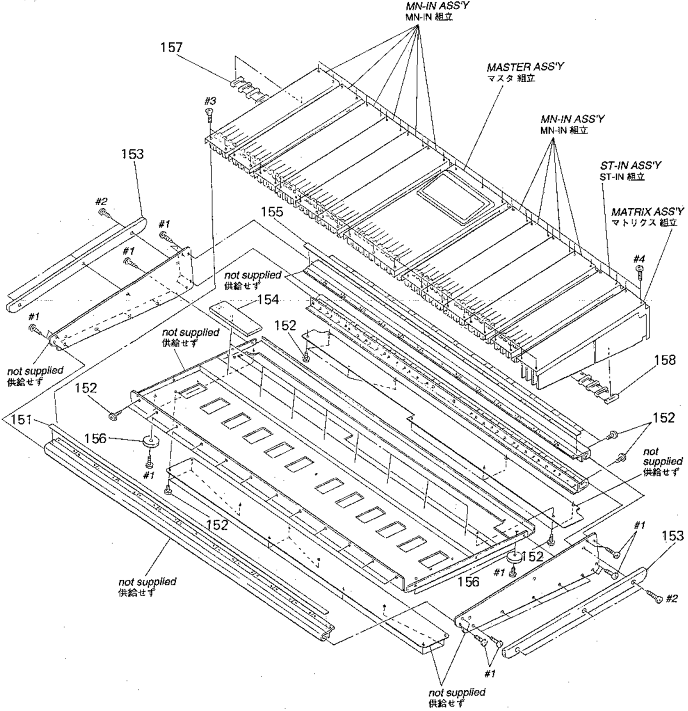
Ref. No.	Part No.	Description	Remark
* 51	2-344-824-11	PLATE (24), CHANNEL INDICATION	
52	3-704-366-01	SCREW (CASE) (M3X8)	
* 53	2-344-566-01	HANDLE	
* 54	2-344-787-01	CUSHION	
* 55	2-344-824-01	PLATE (24), CHANNEL INDICATION	
56	X-4945-465-1	FOOT ASSY	
57	1-777-066-11	CABLE (WITH CONNECTOR)	
58	1-777-067-11	CABLE (WITH CONNECTOR)	

(3) FRAME ASS'Y SECTION (SRP-V332)
(3) フレーム組立部 (SRP-V332)


MN-IN ASS'Y
MN-IN 組立
107
#3
MASTER ASS'Y
マスタ 組立
MN-IN ASS'Y
MN-IN 組立
ST-IN ASS'Y
ST-IN 組立
103
#2
#1
#1
105
#4
not supplied
供給せず
104
102
not supplied
供給せず
#1
MATRIX ASS'Y
マトリクス 組立
not supplied
供給せず
108
102
101
102
106
#1
not supplied
供給せず
103
#1
102
102
#1
106
#2
not supplied
供給せず
#1
not supplied
供給せず

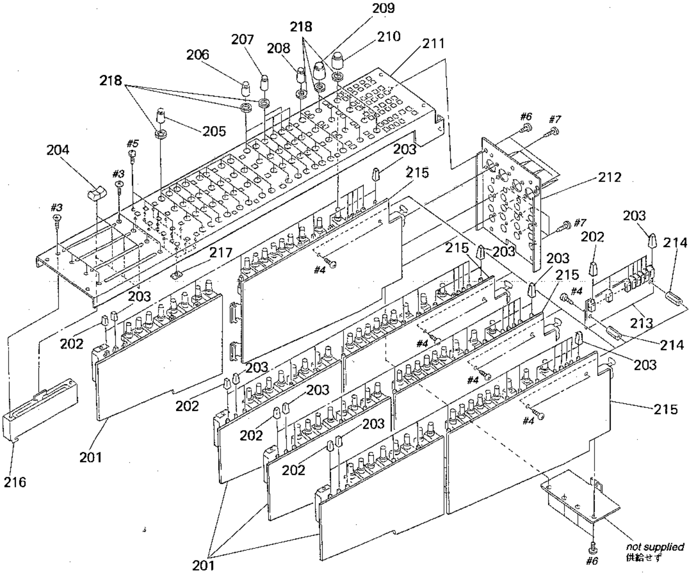
Ref. No.	Part No.	Description	Remark
* 101	2-344-825-11	PLATE (32), CHANNEL INDICATION	
102	3-704-366-01	SCREW (CASE) (M3X8)	
* 103	2-344-566-01	HANDLE	
* 104	2-344-787-01	CUSHION	
* 105	2-344-825-01	PLATE (32), CHANNEL INDICATION	
106	X-4945-465-1	FOOT ASSY	
107	1-777-453-11	CABLE (WITH CONNECTOR)	
108	1-777-454-11	CABLE (WITH CONNECTOR)	

(4) FRAME ASS'Y SECTION (SRP-V340)
(4) フレーム組立部 (SRP-V340)


MN-IN ASS'Y
MN-IN 組立
157
MASTER ASS'Y
マスタ 組立
#3
MN-IN ASS'Y
MN-IN 組立
ST-IN ASS'Y
ST-IN 組立
153
#2
#1
155
MATRIX ASS'Y
マトリクス 組立
#1
#4
not supplied
供給せず
154
#1
not supplied
供給せず
152
158
not supplied
供給せず
152
151
152
156
not
supplied
供給せず
#1
152
#1
153
152
#1
156
#2
not supplied
供給せず
#1
not supplied
供給せず

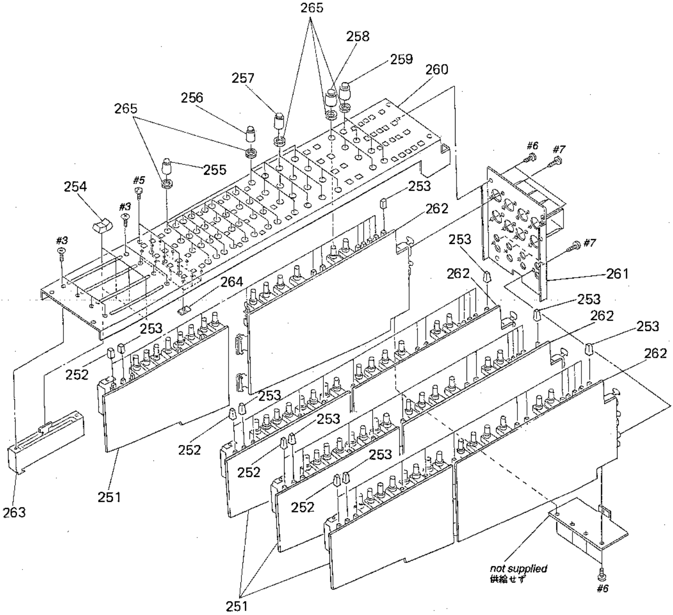
Ref. No.	Part No.	Description	Remark
* 151	2-344-826-11	PLATE (40), CHANNEL INDICATION	
152	3-704-366-01	SCREW (CASE) (M3X8)	
* 153	2-344-566-01	HANDLE	
* 154	2-344-787-01	CUSHION	
* 155	2-344-826-01	PLATE (40), CHANNEL INDICATION	
156	X-4945-465-1	FOOT ASSY	
157	1-777-455-11	CABLE (WITH CONNECTOR)	
158	1-777-456-11	CABLE (WITH CONNECTOR)	

(5) MN-IN ASS'Y SECTION
(5) MN-IN組立部


209
218
210
207
208
211
206
218
205
204
#5
#3
#3
#6
#7
203
215
212
#7
203
202
214
217
#4
215
203
203
215
203
#4
213
202
214
202
203
203
#4
202
203
215
203
#4
202
201
202
216
201
not supplied
供給せず
#6

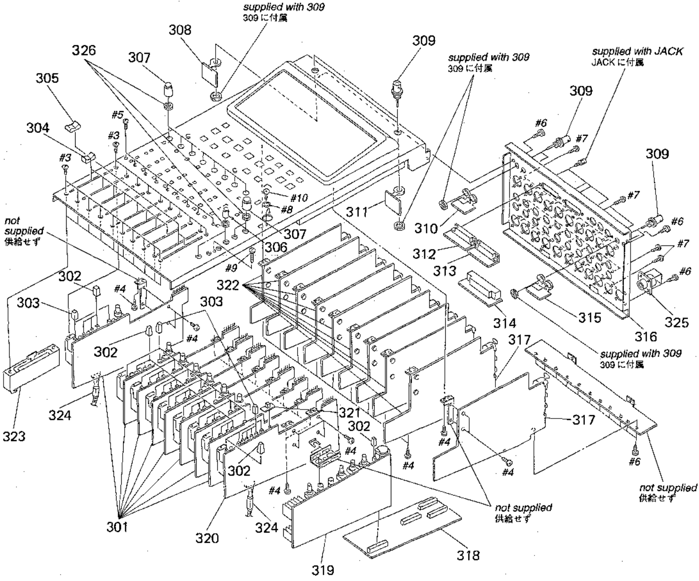
Ref. No.	Part No.	Description	Remark
* 201	A-4587-523-A	AUX BOARD, COMPLETE	
202	2-344-567-01	KNOB (SMALL), PUSH BUTTON (GRAY)	
203	2-344-567-11	KNOB (SMALL), PUSH BUTTON (RED)	
204	4-904-377-21	KNOB, FADER (GRAY)	
205	4-935-181-11	KNOB (SMALL), ROTARY (BLUE)	
206	4-935-181-41	KNOB (SMALL), ROTARY (GRAY)	
207	4-935-181-21	KNOB (SMALL), ROTARY (YELLOW)	
208	4-935-181-01	KNOB (SMALL), ROTARY (GREEN)	
209	4-906-510-21	KNOB (LARGE), ROTARY (GRAY)	
210	4-906-510-31	KNOB (LARGE), ROTARY (RED)	
* 211	2-344-577-01	PANEL (MONO INPUT)	
* 212	2-344-571-01	PLATE (MONO INPUT), JACK	
* 213	1-660-906-11	MN-IN2 BOARD	
* 214	2-280-622-61	SUPPORT (M3X20), HEXAGON	
* 215	A-4588-800-A	MN-IN1 BOARD, COMPLETE	
216	1-225-271-11	RES, SLIDE CARBON VAR 10K	
* 217	3-318-636-02	PLATE, INDICATION, REC	
218	4-857-437-11	NUT (9)	

(6) ST-IN ASS'Y SECTION
(6) ST-IN 組立部


265
258
259
260
257
256
265
255
254
#5
#3
#3
253
262
#6
#7
#7
253
262
261
264
253
262
253
253
252
262
253
252
253
252
253
252
251
263
not supplied
供給せず
#6
251

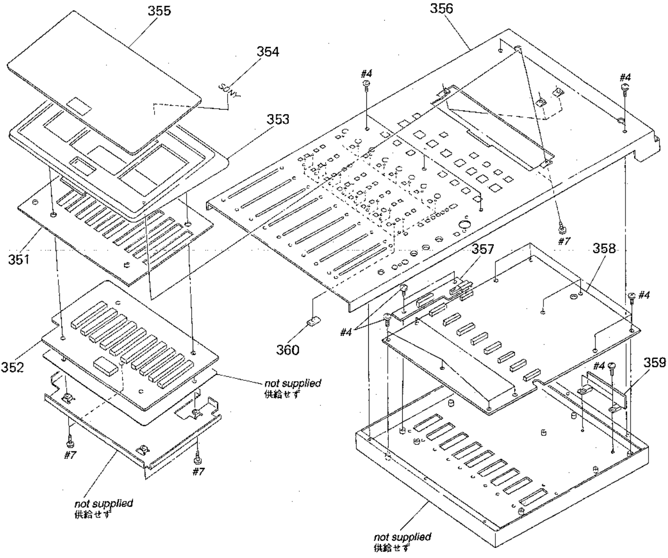
Ref. No.	Part No.	Description	Remark
* 251	A-4587-523-A	AUX BOARD, COMPLETE	
252	2-344-567-01	KNOB (SMALL), PUSH BUTTON (GRAY)	
253	2-344-567-11	KNOB (SMALL), PUSH BUTTON (RED)	
254	4-904-377-21	KNOB, FADER (GRAY)	
255	4-935-181-11	KNOB (SMALL), ROTARY (BLUE)	
256	4-935-181-41	KNOB (SMALL), ROTARY (GRAY)	
257	4-935-181-21	KNOB (SMALL), ROTARY (YELLOW)	
258	4-906-510-21	KNOB (LARGE), ROTARY (GRAY)	
259	4-906-510-31	KNOB (LARGE), ROTARY (RED)	
* 260	2-344-578-01	PANEL (STEREO INPUT)	
* 261	2-344-572-01	PLATE (STEREO INPUT), JACK	
* 262	A-4588-803-A	ST-IN BOARD, COMPLETE	
263	1-225-273-11	RES, SLIDE CARBON VAR 10K/10K	
* 264	3-318-636-02	PLATE, INDICATION, REC	
265	4-857-437-11	NUT (9)	

(7) MASTER ASS'Y SECTION-1
(7) マスタ組立部ー１


supplied with 309
309 に付属
308
326
307
305
304
#5
#3
#3
309
supplied with 309
309 に付属
supplied with JACK
JACK に付属
309
#6
#7
309
#7
#10
#8
311
310
#6
#7
#6
not
supplied
供給せず
307
306
#9
312
313
322
302
#4
303
303
#4
302
314
315
325
316
317
supplied with 309
309 に付属
324
323
321
302
#4
#4
#4
317
#4
#6
302
#4
not supplied
供給せず
not supplied
供給せず
301
320
324
319
318

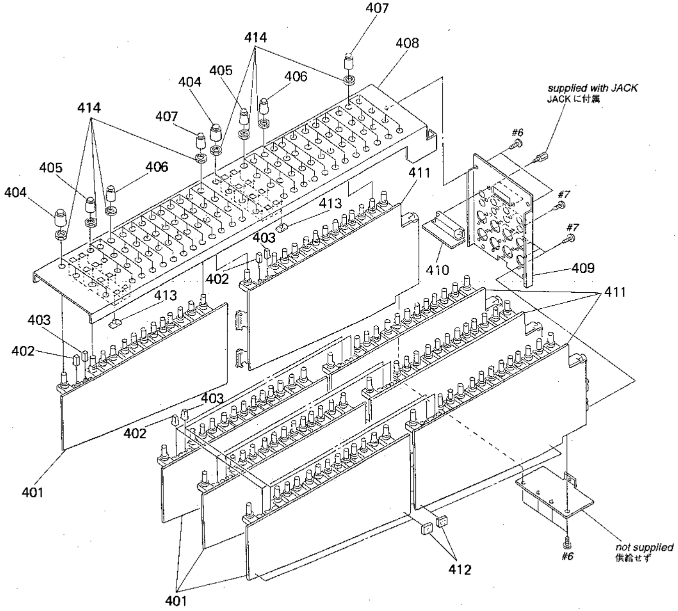
Ref. No.	Part No.	Description	Remark
* 301	A-4588-808-A	GP-OUT2 BOARD, COMPLETE	
302	2-344-567-11	KNOB (SMALL), PUSH BUTTON (RED)	
303	2-344-567-01	KNOB (SMALL), PUSH BUTTON (GRAY)	
304	4-904-377-01	KNOB, FADER (BLACK)	
305	4-904-377-11	KNOB, FADER (RED)	
306	4-935-181-41	KNOB (SMALL), ROTARY (GRAY)	
307	4-906-510-21	KNOB (LARGE), ROTARY (GRAY)	
* 308	1-660-917-11	CN5 BOARD	
309	1-563-354-11	CONNECTOR, BNC	
* 310	1-660-919-11	CN7 BOARD	
* 311	1-660-918-11	CN6 BOARD	
* 312	1-660-916-11	CN4 BOARD	
* 313	1-660-914-11	CN2 BOARD	
* 314	1-660-913-11	CN1 BOARD	
* 315	1-660-920-11	CN8 BOARD	
* 316	2-344-576-01	PLATE (MASTER), JACK	
* 317	A-4587-525-A	ST-OUT BOARD, COMPLETE	
* 318	1-660-908-11	MB BOARD	
* 319	A-4588-811-A	HP BOARD, COMPLETE	
* 320	A-4588-810-A	TB BOARD, COMPLETE	
321	4-922-518-11	KNOB (TIMER)	
* 322	A-4587-524-A	GP-OUT1 BOARD, COMPLETE	
323	1-225-271-11	RES, SLIDE CARBON VAR 10K	
324	1-543-798-11	FILTER, CLAMP	
325	1-508-942-12	CONNECTOR 14P	
326	4-857-437-11	NUT (9)	

(8) MASTER ASS'Y SECTION-2
(8) マスタ組立部− 2


355
354
SONY
353
351
352
not supplied
供給せず
#7
#7
not supplied
供給せず
356
#4
#4
#7
357
358
#4
#4
360
#4
359
not supplied
供給せず

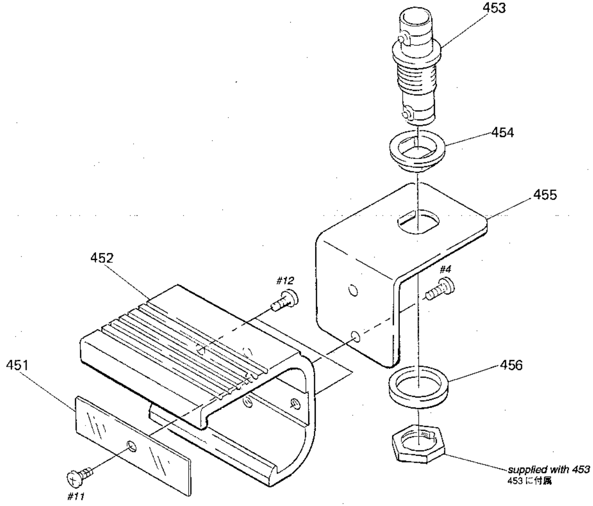
Ref. No.	Part No.	Description	Remark
* 351	2-344-802-01	CASE (B), SHIELD	
* 352	1-660-911-11	METER BOARD	
* 353	2-344-591-01	PANEL	
354	3-704-177-01	EMBLEM (NO. 7), SONY	
355	2-344-588-01	PLATE (PANEL), ORNAMENTAL	
* 356	2-344-580-01	PANEL (MASTER)	
* 357	1-660-915-11	CN3 BOARD	
* 358	A-4587-522-A	CPU BOARD, COMPLETE	
* 359	1-660-912-11	TR BOARD	
* 360	3-318-636-02	PLATE, INDICATION, REC	

(9) MATRIX ASS'Y SECTION
(9) マトリクス組立部


407
414
408
405
406
404
supplied with JACK
JACK に付属
#6
414
407
405
406
404
411
413
#7
403
#7
410
409
402
413
411
403
402
403
402
401
not supplied
供給せず
#6
412
401

Ref. No.	Part No.	Description	Remark
* 401	A-4588-822-A	MTX-OUT2 BOARD, COMPLETE	
402	2-344-567-01	KNOB (SMALL), PUSH BUTTON (GRAY)	
403	2-344-567-11	KNOB (SMALL), PUSH BUTTON (RED)	
404	4-906-510-21	KNOB (LARGE), ROTARY (GRAY)	
405	4-935-181-11	KNOB (SMALL), ROTARY (RED)	
406	4-935-181-41	KNOB (SMALL), ROTARY (GRAY)	
407	4-935-181-21	KNOB (SMALL), ROTARY (YELLOW)	
* 408	2-344-579-01	PANEL (MATRIX OUTPUT)	
* 409	2-344-573-01	PLATE (MATRIX OUTPUT), JACK	
* 410	1-660-910-11	CN9 BOARD	
* 411	A-4588-821-A	MTX-OUT1 BOARD, COMPLETE	
412	3-343-272-01	CUSHION (K)	
* 413	3-318-636-02	PLATE, INDICATION, REC	
414	4-857-437-11	NUT (9)	

(10) LAMP BRACKET ASS'Y SECTION (SRP-V332, V340)
(10) ランプ取付板組立部（SRP-V332, V340）


453
454
455
452
#12
#4
451
456
supplied with 453
453に付属
#11

Ref. No.	Part No.	Description	Remark
* 451	2-344-807-01	SHEET, PROTECTION	
* 452	2-344-806-01	STAND (B), LIGHT	
* 453	1-778-734-11	CONNECTOR, COAXIAL (BNC TYPE)	
* 454	2-344-839-01	BUSHING, INSULATING	
* 455	2-344-805-01	STAND (A), LIGHT	
* 456	2-344-838-01	WASHER, INSULATING	

SECTION 5. ELECTRICAL PARTS LIST
5. 電気部品表

AUX

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

【使用上の注意】
- ここに記載されている部品は，補修用部品であるため，回路図及びセットに付いている部品と異なる場合があります。
- －XX，－Xは標準化部品のためセットに付いている部品と異なる場合があります。
- ＊印の部品は常時在庫しておりません。
- コンデンサの単位でｕＦはμＦを示します。
- 抵抗の単位Ωは省略してあります。
  金被　　：金属被膜抵抗
  サンキン：酸化金属被膜抵抗
- インダクタの単位で，ｕＨはμＨを示します。
- 半導体の名称でｕＡ...，ｕＰＢ...，ｕＰＣ...，ｕＰＤ...等はそれぞれμＡ...，μＰＢ...，μＰＣ...，μＰＤ...を示します。

お願い
図面番号で部品を指定するときは基板名，またはブロックを併せて指定して下さい。

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

Ref. No.	Part No.	Description			Remark
*	A-4587-523-A	AUX BOARD, COMPLETE *******************			
		< CAPACITOR >			
C1	1-164-159-11	CERAMIC	0.1uF		50V
C2	1-164-159-11	CERAMIC	0.1uF		50V
C5	1-124-903-11	ELECT	1uF	20%	50V
C6	1-124-903-11	ELECT	1uF	20%	50V
C9	1-126-967-11	ELECT	47uF	20%	50V
C10	1-126-967-11	ELECT	47uF	20%	50V
C50	1-130-467-00	MYLAR	470PF	5%	50V
		< CONNECTOR >			
CN1	1-564-523-11	PLUG, CONNECTOR 8P			
* CN2	1-764-212-11	CONNECTOR, BOARD TO BOARD 13P			
CN3	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P			
CN4	1-564-523-11	PLUG, CONNECTOR 8P			

Ref. No.	Part No.	Description		Remark
		< DIODE >		
D5	8-719-921-19	DIODE	1SS119-25TG	
D6	8-719-921-19	DIODE	1SS119-25TG	
D7	8-719-921-19	DIODE	1SS119-25TG	
D8	8-719-820-77	DIODE	TLSG116	
D9	8-719-955-04	DIODE	TLG113A	
D10	8-719-802-02	DIODE	TLY113A	
D11	8-719-921-19	DIODE	1SS119-25TG	
D12	8-719-921-19	DIODE	1SS119-25TG	
D13	8-719-921-19	DIODE	1SS119-25TG	
D14	8-719-110-96	DIODE	RD2.0ES-T2B2	
		< IC >		
IC1	8-759-916-52	IC	TC74HC165AP	
IC2	8-759-233-43	IC	TC74HC595AP	
IC3	8-759-634-51	IC	NJM4558D	

AUX CN1 CN2

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q1	8-729-029-56	TRANSISTOR DTA144ESA-TP	
Q2	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q3	8-729-195-23	TRANSISTOR 2SA952TP-K1	
Q5	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q6	8-729-195-23	TRANSISTOR 2SA952TP-K1	
Q7	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q8	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q9	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q10	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q11	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q12	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q13	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q14	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q15	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
		< RESISTOR >	
R1	1-249-437-11	CARBON 47K 5% 1/4W	
R2	1-249-437-11	CARBON 47K 5% 1/4W	
R3	1-249-433-11	CARBON 22K 5% 1/4W	
R4	1-249-437-11	CARBON 47K 5% 1/4W	
R5	1-249-437-11	CARBON 47K 5% 1/4W	
R6	1-249-437-11	CARBON 47K 5% 1/4W	
R7	1-249-437-11	CARBON 47K 5% 1/4W	
R8	1-249-437-11	CARBON 47K 5% 1/4W	
R9	1-249-437-11	CARBON 47K 5% 1/4W	
R10	1-249-437-11	CARBON 47K 5% 1/4W	
R11	1-249-437-11	CARBON 47K 5% 1/4W	
R12	1-249-437-11	CARBON 47K 5% 1/4W	
R13	1-249-437-11	CARBON 47K 5% 1/4W	
R14	1-215-421-00	METAL 1K 1% 1/4W	
R15	1-215-421-00	METAL 1K 1% 1/4W	
R16	1-215-445-00	METAL 10K 1% 1/4W	
R21	1-247-887-00	CARBON 220K 5% 1/4W	
R22	1-249-435-11	CARBON 33K 5% 1/4W	
R23	1-215-449-00	METAL 15K 1% 1/4W	
R24	1-215-421-00	METAL 1K 1% 1/4W	
R25	1-215-421-00	METAL 1K 1% 1/4W	
R26	1-247-887-00	CARBON 220K 5% 1/4W	
R27	1-215-449-00	METAL 15K 1% 1/4W	
R28	1-215-449-00	METAL 15K 1% 1/4W	
R29	1-249-441-11	CARBON 100K 5% 1/4W	
R30	1-215-421-00	METAL 1K 1% 1/4W	
R31	1-249-437-11	CARBON 47K 5% 1/4W	
R32	1-215-449-00	METAL 15K 1% 1/4W	
⚠R33	1-212-869-00	FUSIBLE 33 5% 1/4W	F
R34	1-249-437-11	CARBON 47K 5% 1/4W	
R35	1-249-437-11	CARBON 47K 5% 1/4W	
R36	1-249-437-11	CARBON 47K 5% 1/4W	
R37	1-247-887-00	CARBON 220K 5% 1/4W	
R38	1-247-887-00	CARBON 220K 5% 1/4W	
R39	1-215-421-00	METAL 1K 1% 1/4W	
R40	1-247-887-00	CARBON 220K 5% 1/4W	
R41	1-249-437-11	CARBON 47K 5% 1/4W	
R42	1-249-437-11	CARBON 47K 5% 1/4W	
R50	1-249-437-11	CARBON 47K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV1	1-225-269-11	RES, VAR, CARBON 50K (AUX1)	
RV2	1-225-269-11	RES, VAR, CARBON 50K (AUX2)	
RV3	1-225-269-11	RES, VAR, CARBON 50K (AUX3)	
RV4	1-225-269-11	RES, VAR, CARBON 50K (AUX4)	
RV5	1-225-269-11	RES, VAR, CARBON 50K (AUX5)	
RV6	1-225-269-11	RES, VAR, CARBON 50K (AUX6)	
RV7	1-225-269-11	RES, VAR, CARBON 50K (AUX7)	
RV8	1-225-269-11	RES, VAR, CARBON 50K (AUX8)	
		< SWITCH >	
SW1	1-572-004-11	SWITCH, PUSH (PRE)	
SW2	1-572-004-11	SWITCH, PUSH (PRE)	
SW3	1-572-004-11	SWITCH, PUSH (PRE)	
SW4	1-554-824-21	SWITCH, PUSH (1 KEY) (ON)	
SW5	1-554-824-21	SWITCH, PUSH (1 KEY) (PFL)	

****

Ref. No.	Part No.	Description	Remark
*	1-660-913-11	CN1 BOARD *********	
		< CONNECTOR >	
CN501	1-564-510-11	PLUG, CONNECTOR 7P	
CN502	1-580-042-11	CONNECTOR, DIN	
		< DIODE >	
D501	8-719-113-56	DIODE RD22ES-T2B2	
D502	8-719-113-56	DIODE RD22ES-T2B2	
D503	8-719-113-56	DIODE RD22ES-T2B2	
D504	8-719-113-56	DIODE RD22ES-T2B2	
D505	8-719-113-56	DIODE RD22ES-T2B2	
D506	8-719-113-56	DIODE RD22ES-T2B2	

****

Ref. No.	Part No.	Description	Remark
*	1-660-914-11	CN2 BOARD *********	
		< CONNECTOR >	
CN601	1-564-511-11	PLUG, CONNECTOR 8P	
* CN602	1-564-512-11	PLUG, CONNECTOR 9P	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。従って交換時は，必ず指定の部品を使用して下さい。

Ref. No.	Part No.	Description	Remark
CN603	1-764-121-21	SOCKET, (D) SUB CONNECTOR 25P	
		< DIODE >	
D601	8-719-921-19	DIODE 1SS119-25TG	
D602	8-719-921-19	DIODE 1SS119-25TG	
D603	8-719-921-19	DIODE 1SS119-25TG	
D604	8-719-921-19	DIODE 1SS119-25TG	
D605	8-719-921-19	DIODE 1SS119-25TG	
D606	8-719-921-19	DIODE 1SS119-25TG	
D607	8-719-921-19	DIODE 1SS119-25TG	
D608	8-719-921-19	DIODE 1SS119-25TG	
D609	8-719-921-19	DIODE 1SS119-25TG	
D610	8-719-921-19	DIODE 1SS119-25TG	
D611	8-719-921-19	DIODE 1SS119-25TG	
D612	8-719-921-19	DIODE 1SS119-25TG	
D613	8-719-921-19	DIODE 1SS119-25TG	
D614	8-719-921-19	DIODE 1SS119-25TG	
D615	8-719-921-19	DIODE 1SS119-25TG	
D616	8-719-921-19	DIODE 1SS119-25TG	
**			
*	1-660-915-11	CN3 BOARD *********	
		< CONNECTOR >	
CN701	1-750-176-11	HOUSING, CONNECTOR (PC BOARD) 15P	
* CN702	1-764-211-11	CONNECTOR, BOARD TO BOARD 13P	
**			
*	1-660-916-11	CN4 BOARD *********	
		< CONNECTOR >	
CN201	1-564-511-11	PLUG, CONNECTOR 8P	
CN202	1-564-511-11	PLUG, CONNECTOR 8P	
CN203	1-564-511-11	PLUG, CONNECTOR 8P	
CN204	1-764-121-21	SOCKET, (D) SUB CONNECTOR 25P	
**			
*	1-660-917-11	CN5 BOARD *********	
		< CONNECTOR >	
CN301	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
CN302	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
		< COIL >	
L301	1-424-090-11	COIL, LINE FILTER	
L302	1-424-090-11	COIL, LINE FILTER	
**			

Ref. No.	Part No.	Description	Remark
*	1-660-918-11	CN6 BOARD *********	
		< CONNECTOR >	
CN304	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
CN305	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
		< COIL >	
L303	1-424-090-11	COIL, LINE FILTER	
L304	1-424-090-11	COIL, LINE FILTER	
**			
*	1-660-919-11	CN7 BOARD *********	
		< CONNECTOR >	
CN307	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
CN308	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
		< COIL >	
L305	1-424-090-11	COIL, LINE FILTER	
L306	1-424-090-11	COIL, LINE FILTER	
L307	1-424-090-11	COIL, LINE FILTER	
L308	1-424-090-11	COIL, LINE FILTER	
**			
*	1-660-920-11	CN8 BOARD *********	
		< CONNECTOR >	
CN311	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
		< COIL >	
L309	1-424-090-11	COIL, LINE FILTER	
L310	1-424-090-11	COIL, LINE FILTER	
L311	1-424-090-11	COIL, LINE FILTER	
L312	1-424-090-11	COIL, LINE FILTER	
**			
*	1-660-910-11	CN9 BOARD *********	
	1-564-511-11	PLUG, CONNECTOR 8P	
	1-764-121-21	SOCKET, (D) SUB CONECTOR 25P	
**			

CPU

Ref. No.	Part No.	Description			Remark
*	A-4587-522-A	CPU BOARD, COMPLETE ********************			
	3-708-877-01	CAP			

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C201	1-126-967-11	ELECT	47uF	20%	50V
C202	1-130-469-00	MYLAR	680PF	5%	50V
C203	1-126-941-11	ELECT	470uF	20%	25V
C204	1-164-159-11	CERAMIC	0.1uF		50V
C205	1-164-159-11	CERAMIC	0.1uF		50V
C206	1-164-159-11	CERAMIC	0.1uF		50V
C207	1-164-159-11	CERAMIC	0.1uF		50V
C208	1-164-159-11	CERAMIC	0.1uF		50V
C209	1-164-159-11	CERAMIC	0.1uF		50V
C210	1-162-203-31	CERAMIC	15PF	5%	50V
C211	1-162-203-31	CERAMIC	15PF	5%	50V
C212	1-164-159-11	CERAMIC	0.1uF		50V
C213	1-164-159-11	CERAMIC	0.1uF		50V
C214	1-164-159-11	CERAMIC	0.1uF		50V
C215	1-164-159-11	CERAMIC	0.1uF		50V
C216	1-164-159-11	CERAMIC	0.1uF		50V
C217	1-164-159-11	CERAMIC	0.1uF		50V
C218	1-126-967-11	ELECT	47uF	20%	50V
C219	1-130-483-00	MYLAR	0.01uF	5%	50V
C220	1-130-483-00	MYLAR	0.01uF	5%	50V
C221	1-130-483-00	MYLAR	0.01uF	5%	50V
C222	1-130-483-00	MYLAR	0.01uF	5%	50V
C223	1-164-159-11	CERAMIC	0.1uF		50V
C224	1-164-159-11	CERAMIC	0.1uF		50V
C225	1-164-159-11	CERAMIC	0.1uF		50V
C226	1-164-159-11	CERAMIC	0.1uF		50V
C230	1-164-159-11	CERAMIC	0.1uF		50V
C231	1-164-159-11	CERAMIC	0.1uF		50V
C232	1-164-159-11	CERAMIC	0.1uF		50V
C233	1-164-159-11	CERAMIC	0.1uF		50V
C234	1-164-159-11	CERAMIC	0.1uF		50V
C235	1-164-159-11	CERAMIC	0.1uF		50V
C236	1-126-941-11	ELECT	470uF	20%	25V
C240	1-164-159-11	CERAMIC	0.1uF		50V
C241	1-164-159-11	CERAMIC	0.1uF		50V
C248	1-164-159-11	CERAMIC	0.1uF		50V
C249	1-164-159-11	CERAMIC	0.1uF		50V
C250	1-164-159-11	CERAMIC	0.1uF		50V
C251	1-164-159-11	CERAMIC	0.1uF		50V
C252	1-164-159-11	CERAMIC	0.1uF		50V
C253	1-164-159-11	CERAMIC	0.1uF		50V
C254	1-164-159-11	CERAMIC	0.1uF		50V
C255	1-164-159-11	CERAMIC	0.1uF		50V
C256	1-164-159-11	CERAMIC	0.1uF		50V
C257	1-164-159-11	CERAMIC	0.1uF		50V
C258	1-164-159-11	CERAMIC	0.1uF		50V
C259	1-164-159-11	CERAMIC	0.1uF		50V
C260	1-130-469-00	MYLAR	680PF	5%	50V
C261	1-130-469-00	MYLAR	680PF	5%	50V
C262	1-130-469-00	MYLAR	680PF	5%	50V
C270	1-126-937-11	ELECT	4700uF	20%	16V

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN201	1-564-509-11	PLUG, CONNECTOR 6P	
* CN211	1-764-212-11	CONNECTOR, BOARD TO BOARD 13P	
CN212	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	
CN213	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	
CN214	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	
CN215	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	
CN216	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	
CN217	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	
CN218	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	
CN219	1-750-176-11	HOUSING, CONNECTOR(PC BOARD)15P	

< DIODE >

Ref. No.	Part No.	Description		Remark
D201	8-719-109-97	DIODE	RD6.8ESB	
D202	8-719-921-19	DIODE	1SS119-25TG	
D210	8-719-200-77	DIODE	10E2N	
D230	8-719-921-19	DIODE	1SS119-25TG	
D231	8-719-921-19	DIODE	1SS119-25TG	
D232	8-719-921-19	DIODE	1SS119-25TG	
D233	8-719-921-19	DIODE	1SS119-25TG	
D234	8-719-921-19	DIODE	1SS119-25TG	
D235	8-719-921-19	DIODE	1SS119-25TG	
D236	8-719-921-19	DIODE	1SS119-25TG	
D237	8-719-921-19	DIODE	1SS119-25TG	
D238	8-719-110-96	DIODE	RD2.0ES-T2B2	
D242	8-719-921-19	DIODE	1SS119-25TG	
D244	8-719-921-19	DIODE	1SS119-25TG	
D245	8-719-921-19	DIODE	1SS119-25TG	
D250	8-719-921-19	DIODE	1SS119-25TG	
D251	8-719-921-19	DIODE	1SS119-25TG	
D252	8-719-921-19	DIODE	1SS119-25TG	
D253	8-719-921-19	DIODE	1SS119-25TG	
D254	8-719-921-19	DIODE	1SS119-25TG	
D255	8-719-921-19	DIODE	1SS119-25TG	
D256	8-719-921-19	DIODE	1SS119-25TG	
D257	8-719-921-19	DIODE	1SS119-25TG	
D262	8-719-921-19	DIODE	1SS119-25TG	
D263	8-719-921-19	DIODE	1SS119-25TG	

Ref. No.	Part No.	Description		Remark
D264	8-719-921-19	DIODE	1SS119-25TG	
D265	8-719-921-19	DIODE	1SS119-25TG	
D270	8-719-921-19	DIODE	1SS119-25TG	
D271	8-719-921-19	DIODE	1SS119-25TG	
D272	8-719-921-19	DIODE	1SS119-25TG	
D273	8-719-921-19	DIODE	1SS119-25TG	
D274	8-719-921-19	DIODE	1SS119-25TG	
D275	8-719-921-19	DIODE	1SS119-25TG	
D276	8-719-921-19	DIODE	1SS119-25TG	
D277	8-719-921-19	DIODE	1SS119-25TG	
D282	8-719-921-19	DIODE	1SS119-25TG	
D283	8-719-921-19	DIODE	1SS119-25TG	
D284	8-719-921-19	DIODE	1SS119-25TG	
D285	8-719-921-19	DIODE	1SS119-25TG	
		< IC >		
IC202	8-759-636-16	IC	M51957AL	
IC203	8-759-636-16	IC	M51957AL	
IC204	8-759-294-18	IC	HN58C65P-25	
* IC205	8-759-462-01	IC	HD6475208P10-V300	
IC207	8-759-007-19	IC	TC74HC4051AP	
IC208	8-759-007-19	IC	TC74HC4051AP	
IC209	8-759-007-20	IC	TC74HC4052AP	
IC210	8-759-032-85	IC	TC74HC138AP	
IC211	8-759-032-85	IC	TC74HC138AP	
IC212	8-759-032-85	IC	TC74HC138AP	
IC213	8-759-032-85	IC	TC74HC138AP	
IC214	8-759-916-48	IC	TC74HC151AP	
IC216	8-759-916-52	IC	TC74HC165AP	
IC217	8-759-233-43	IC	TC74HC595AP	
IC218	8-759-916-52	IC	TC74HC165AP	
IC219	8-759-233-43	IC	TC74HC595AP	
IC220	8-759-916-52	IC	TC74HC165AP	
IC221	8-759-233-43	IC	TC74HC595AP	
IC222	8-759-916-52	IC	TC74HC165AP	
IC223	8-759-233-43	IC	TC74HC595AP	
		< COIL >		
L201	1-424-090-11	COIL, LINE FILTER		
L202	1-424-090-11	COIL, LINE FILTER		
L203	1-424-090-11	COIL, LINE FILTER		
L204	1-424-090-11	COIL, LINE FILTER		
L205	1-424-090-11	COIL, LINE FILTER		
L206	1-424-090-11	COIL, LINE FILTER		
L207	1-424-090-11	COIL, LINE FILTER		
L208	1-424-090-11	COIL, LINE FILTER		
		< PHOTO INTERRUPTER >		
PH201	8-719-938-71	PHOTO COUPLER PC900		

Ref. No.	Part No.	Description		Remark
		< TRANSISTOR >		
Q201	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q202	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q203	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q204	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q205	8-729-195-23	TRANSISTOR	2SA952TP-K1	
Q206	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q207	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q208	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q210	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q211	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q212	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q213	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q214	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q215	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q216	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q217	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2	
Q230	8-729-195-23	TRANSISTOR	2SA952TP-K1	
Q231	8-729-195-23	TRANSISTOR	2SA952TP-K1	
Q232	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q234	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q236	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q237	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q238	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q239	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q240	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q241	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q242	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q243	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q244	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q245	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q246	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q247	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q250	8-729-195-23	TRANSISTOR	2SA952TP-K1	
Q251	8-729-195-23	TRANSISTOR	2SA952TP-K1	
Q252	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q253	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q254	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q255	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q256	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q257	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q258	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q259	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q260	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q261	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q262	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q263	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q264	8-729-030-03	TRANSISTOR	DTC144ESA-TP	

CPU

Ref. No.	Part No.	Description		Remark
Q265	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q266	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q267	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q270	8-729-195-23	TRANSISTOR	2SA952TP-K1	
Q271	8-729-195-23	TRANSISTOR	2SA952TP-K1	
Q272	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q273	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q274	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q276	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q277	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q278	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q279	8-729-207-46	TRANSISTOR	2SC3112B-TPE2	
Q280	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q281	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q282	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q283	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q284	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q285	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q286	8-729-030-03	TRANSISTOR	DTC144ESA-TP	
Q287	8-729-030-03	TRANSISTOR	DTC144ESA-TP	

< RESISTOR & CAPACITOR >

Ref. No.	Part No.	Description				Remark
R201	1-249-437-11	CARBON	47K	5%	1/4W	
R202	1-249-437-11	CARBON	47K	5%	1/4W	
R204	1-215-437-00	METAL	4.7K	1%	1/4W	
R205	1-215-405-00	METAL	220	1%	1/4W	
R206	1-215-405-00	METAL	220	1%	1/4W	
R207	1-215-405-00	METAL	220	1%	1/4W	
R208	1-249-433-11	CARBON	22K	5%	1/4W	
R209	1-215-405-00	METAL	220	1%	1/4W	
R210	1-215-405-00	METAL	220	1%	1/4W	
R211	1-215-445-00	METAL	10K	1%	1/4W	
R212	1-164-159-11	CERAMIC	0.1MF			50V
R212	1-215-435-00	METAL	3.9K	1%	1/4W	
R213	1-215-441-00	METAL	6.8K	1%	1/4W	
R214	1-164-159-11	CERAMIC	0.1MF			50V
R214	1-215-427-00	METAL	1.8K	1%	1/4W	
R215	1-215-437-00	METAL	4.7K	1%	1/4W	
R216	1-215-437-00	METAL	4.7K	1%	1/4W	
R217	1-215-437-00	METAL	4.7K	1%	1/4W	
R218	1-215-437-00	METAL	4.7K	1%	1/4W	
R219	1-215-437-00	METAL	4.7K	1%	1/4W	
R220	1-215-437-00	METAL	4.7K	1%	1/4W	
R221	1-215-445-00	METAL	10K	1%	1/4W	
R222	1-215-445-00	METAL	10K	1%	1/4W	
R223	1-247-807-31	CARBON	100	5%	1/4W	
R224	1-247-807-31	CARBON	100	5%	1/4W	
R225	1-247-807-31	CARBON	100	5%	1/4W	
R226	1-247-807-31	CARBON	100	5%	1/4W	
R228	1-247-807-31	CARBON	100	5%	1/4W	
R229	1-247-807-31	CARBON	100	5%	1/4W	
R230	1-247-807-31	CARBON	100	5%	1/4W	
R231	1-249-433-11	CARBON	22K	5%	1/4W	
R232	1-215-421-00	METAL	1K	1%	1/4W	
R233	1-249-437-11	CARBON	47K	5%	1/4W	
R234	1-249-437-11	CARBON	47K	5%	1/4W	
R240	1-215-435-00	METAL	3.9K	1%	1/4W	
R241	1-215-435-00	METAL	3.9K	1%	1/4W	
R242	1-215-435-00	METAL	3.9K	1%	1/4W	
R243	1-215-435-00	METAL	3.9K	1%	1/4W	
R244	1-215-435-00	METAL	3.9K	1%	1/4W	
R245	1-215-435-00	METAL	3.9K	1%	1/4W	
R246	1-215-435-00	METAL	3.9K	1%	1/4W	
R247	1-215-435-00	METAL	3.9K	1%	1/4W	
R250	1-215-435-00	METAL	3.9K	1%	1/4W	
R251	1-215-435-00	METAL	3.9K	1%	1/4W	
R252	1-215-435-00	METAL	3.9K	1%	1/4W	
R253	1-215-435-00	METAL	3.9K	1%	1/4W	
R254	1-215-435-00	METAL	3.9K	1%	1/4W	
R255	1-215-435-00	METAL	3.9K	1%	1/4W	
R256	1-215-435-00	METAL	3.9K	1%	1/4W	
R257	1-215-435-00	METAL	3.9K	1%	1/4W	
R260	1-215-435-00	METAL	3.9K	1%	1/4W	
R261	1-215-435-00	METAL	3.9K	1%	1/4W	
R262	1-215-435-00	METAL	3.9K	1%	1/4W	
R263	1-215-435-00	METAL	3.9K	1%	1/4W	
⚠R282	1-202-972-61	FUSIBLE	1	5%	1/4W	F
⚠R283	1-202-972-61	FUSIBLE	1	5%	1/4W	F
⚠R284	1-202-972-61	FUSIBLE	1	5%	1/4W	F
⚠R285	1-202-972-61	FUSIBLE	1	5%	1/4W	F
R286	1-215-437-00	METAL	4.7K	1%	1/4W	
R287	1-215-437-00	METAL	4.7K	1%	1/4W	
R288	1-215-437-00	METAL	4.7K	1%	1/4W	
R289	1-215-437-00	METAL	4.7K	1%	1/4W	
R290	1-215-437-00	METAL	4.7K	1%	1/4W	
R291	1-215-437-00	METAL	4.7K	1%	1/4W	
R292	1-215-437-00	METAL	4.7K	1%	1/4W	
R293	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R294	1-202-972-61	FUSIBLE	1	5%	1/4W	F
⚠R295	1-202-972-61	FUSIBLE	1	5%	1/4W	F
R301	1-249-437-11	CARBON	47K	5%	1/4W	
R302	1-249-437-11	CARBON	47K	5%	1/4W	
R303	1-249-437-11	CARBON	47K	5%	1/4W	
R304	1-249-437-11	CARBON	47K	5%	1/4W	
R305	1-249-437-11	CARBON	47K	5%	1/4W	
R306	1-249-437-11	CARBON	47K	5%	1/4W	
R307	1-249-437-11	CARBON	47K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。 従って交換時は，必ず指定の部品を使用して下さい。

Ref. No.	Part No.	Description				Remark
R308	1-249-437-11	CARBON	47K	5%	1/4W	
R309	1-249-437-11	CARBON	47K	5%	1/4W	
R310	1-249-437-11	CARBON	47K	5%	1/4W	
R311	1-249-437-11	CARBON	47K	5%	1/4W	
R312	1-249-437-11	CARBON	47K	5%	1/4W	
R313	1-249-437-11	CARBON	47K	5%	1/4W	
R314	1-249-437-11	CARBON	47K	5%	1/4W	
R315	1-249-437-11	CARBON	47K	5%	1/4W	
R316	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R320	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R321	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R322	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R323	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R324	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R325	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R326	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R327	1-249-393-11	CARBON	10	5%	1/4W	F
R330	1-215-421-00	METAL	1K	1%	1/4W	
⚠R331	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R332	1-249-437-11	CARBON	47K	5%	1/4W	
R333	1-249-437-11	CARBON	47K	5%	1/4W	
R334	1-249-437-11	CARBON	47K	5%	1/4W	
R335	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R337	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R338	1-249-437-11	CARBON	47K	5%	1/4W	
R339	1-249-437-11	CARBON	47K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R351	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R352	1-249-437-11	CARBON	47K	5%	1/4W	
R353	1-249-437-11	CARBON	47K	5%	1/4W	
R354	1-249-437-11	CARBON	47K	5%	1/4W	
R355	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R357	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R358	1-249-437-11	CARBON	47K	5%	1/4W	
R359	1-249-437-11	CARBON	47K	5%	1/4W	
R360	1-249-437-11	CARBON	47K	5%	1/4W	
R361	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R371	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R372	1-249-437-11	CARBON	47K	5%	1/4W	
R373	1-249-437-11	CARBON	47K	5%	1/4W	
R374	1-249-437-11	CARBON	47K	5%	1/4W	
R375	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R377	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R378	1-249-437-11	CARBON	47K	5%	1/4W	
R379	1-249-437-11	CARBON	47K	5%	1/4W	
R380	1-249-437-11	CARBON	47K	5%	1/4W	
R381	1-249-437-11	CARBON	47K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R401	1-249-437-11	CARBON	47K	5%	1/4W	
R402	1-249-437-11	CARBON	47K	5%	1/4W	
R403	1-249-437-11	CARBON	47K	5%	1/4W	
R404	1-249-437-11	CARBON	47K	5%	1/4W	
R405	1-249-437-11	CARBON	47K	5%	1/4W	
R406	1-249-437-11	CARBON	47K	5%	1/4W	
R407	1-249-437-11	CARBON	47K	5%	1/4W	
R408	1-249-437-11	CARBON	47K	5%	1/4W	
R411	1-249-437-11	CARBON	47K	5%	1/4W	
R412	1-249-437-11	CARBON	47K	5%	1/4W	
R413	1-249-437-11	CARBON	47K	5%	1/4W	
R414	1-249-437-11	CARBON	47K	5%	1/4W	
R415	1-249-437-11	CARBON	47K	5%	1/4W	
R416	1-249-437-11	CARBON	47K	5%	1/4W	
R417	1-249-437-11	CARBON	47K	5%	1/4W	
R418	1-249-437-11	CARBON	47K	5%	1/4W	
R421	1-249-437-11	CARBON	47K	5%	1/4W	
R422	1-249-437-11	CARBON	47K	5%	1/4W	
R423	1-249-437-11	CARBON	47K	5%	1/4W	
R424	1-249-437-11	CARBON	47K	5%	1/4W	
R425	1-249-437-11	CARBON	47K	5%	1/4W	
R426	1-249-437-11	CARBON	47K	5%	1/4W	
R427	1-249-437-11	CARBON	47K	5%	1/4W	
R428	1-249-437-11	CARBON	47K	5%	1/4W	
R429	1-215-445-00	METAL	10K	1%	1/4W	

< SWITCH >

Ref. No.	Part No.	Description
SW201	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW203	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW205	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW206	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW207	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW208	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW211	1-692-890-11	SWITCH, TACTILE
SW212	1-692-890-11	SWITCH, TACTILE
SW213	1-692-890-11	SWITCH, TACTILE
SW214	1-692-890-11	SWITCH, TACTILE
SW215	1-692-890-11	SWITCH, TACTILE
SW216	1-692-890-11	SWITCH, TACTILE
SW217	1-692-890-11	SWITCH, TACTILE
SW218	1-692-890-11	SWITCH, TACTILE
SW221	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW222	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW223	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW225	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW226	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW227	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)
SW228	1-692-994-11	SWITCH, TACTILE (ILLUMINATED)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。従って交換時は，必ず指定の部品を使用して下さい。

CPU GP-OUT1

Ref. No.	Part No.	Description			Remark
		< VIBRATOR >			
X201	1-577-110-11	VIBRATOR, CRYSTAL			
**					
*	A-4587-524-A	GP-OUT1 BOARD, COMPLETE			
		**********************			
*	1-560-242-11	BUS BAR 3P			
*	1-560-242-91	BUS BAR 10P			
		< CAPACITOR >			
C102	1-107-597-11	MICA	22PF	5%	500V
C103	1-126-967-11	ELECT	47uF	20%	50V
C104	1-126-967-11	ELECT	47uF	20%	50V
C105	1-126-949-11	ELECT	220uF	20%	35V
C106	1-107-202-00	MICA	10PF	5%	500V
C107	1-126-967-11	ELECT	47uF	20%	50V
C108	1-126-967-11	ELECT	47uF	20%	50V
C109	1-107-597-11	MICA	22PF	5%	500V
C110	1-107-202-00	MICA	10PF	5%	500V
C111	1-126-941-11	ELECT	470uF	20%	25V
C112	1-126-941-11	ELECT	470uF	20%	25V
C113	1-126-949-11	ELECT	220uF	20%	35V
C115	1-126-967-11	ELECT	47uF	20%	50V
C116	1-126-967-11	ELECT	47uF	20%	50V
C117	1-126-967-11	ELECT	47uF	20%	50V
C118	1-126-967-11	ELECT	47uF	20%	50V
C119	1-107-163-00	MICA	47PF	5%	500V
C120	1-126-967-11	ELECT	47uF	20%	50V
C130	1-130-467-00	MYLAR	470PF	5%	50V
C201	1-126-941-11	ELECT	470uF	20%	25V
C202	1-107-202-00	MICA	10PF	5%	500V
C203	1-126-967-11	ELECT	47uF	20%	50V
C204	1-126-967-11	ELECT	47uF	20%	50V
C205	1-126-949-11	ELECT	220uF	20%	35V
C206	1-126-967-11	ELECT	47uF	20%	50V
C207	1-126-967-11	ELECT	47uF	20%	50V
C208	1-126-967-11	ELECT	47uF	20%	50V
C209	1-107-597-11	MICA	22PF	5%	500V
C210	1-107-202-00	MICA	10PF	5%	500V
C211	1-126-941-11	ELECT	470uF	20%	25V
C212	1-126-941-11	ELECT	470uF	20%	25V
C213	1-126-967-11	ELECT	47uF	20%	50V
C301	1-126-942-61	ELECT	1000uF	20%	25V
C302	1-126-942-61	ELECT	1000uF	20%	25V
		< CONNECTOR >			
* CN1	1-573-991-11	PIN, CONNECTOR (PC BOARD) 50P			
* CN2	1-564-519-11	PLUG, CONNECTOR 4P			
* CN3	1-565-730-11	PIN, CONNECTOR(RIGHT ANGLE)34P			
* CN4	1-564-507-11	PLUG, CONNECTOR 4P			
* CN5	1-764-211-11	CONNECTOR, BOARD TO BOARD 13P			
* CN6	1-764-211-11	CONNECTOR, BOARD TO BOARD 13P			
CN8	1-778-008-11	CONNECTOR (PLUG) 3P			
CN9	1-580-041-11	JACK, LARGE (2 GANG)			
CN10	1-778-008-11	CONNECTOR (PLUG) 3P			
CN11	1-537-865-11	TERMINAL (M3)			
		< DIODE >			
D101	8-719-921-19	DIODE	1SS119-25TG		
D102	8-719-113-56	DIODE	RD22ES-T2B2		
D103	8-719-113-56	DIODE	RD22ES-T2B2		
D104	8-719-113-56	DIODE	RD22ES-T2B2		
D105	8-719-113-56	DIODE	RD22ES-T2B2		
D106	8-719-921-19	DIODE	1SS119-25TG		
D107	8-719-113-56	DIODE	RD22ES-T2B2		
D108	8-719-113-56	DIODE	RD22ES-T2B2		
D109	8-719-113-56	DIODE	RD22ES-T2B2		
D110	8-719-113-56	DIODE	RD22ES-T2B2		
D201	8-719-921-19	DIODE	1SS119-25TG		
D202	8-719-113-56	DIODE	RD22ES-T2B2		
D203	8-719-113-56	DIODE	RD22ES-T2B2		
D204	8-719-113-56	DIODE	RD22ES-T2B2		
D205	8-719-113-56	DIODE	RD22ES-T2B2		
D206	8-719-921-19	DIODE	1SS119-25TG		
D208	8-719-921-19	DIODE	1SS119-25TG		
		< IC >			
IC101	8-759-710-59	IC	NJM4580D-D		
IC102	8-759-710-59	IC	NJM4580D-D		
IC103	8-759-710-59	IC	NJM4580D-D		
IC104	8-759-710-59	IC	NJM4580D-D		
IC201	8-759-710-59	IC	NJM4580D-D		
IC202	8-759-710-59	IC	NJM4580D-D		
		< COIL >			
L102	1-424-090-11	COIL, LINE FILTER			
		< TRANSISTOR >			
Q101	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q102	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q104	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q105	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q107	8-729-232-29	TRANSISTOR	2SK362-BL		
Q108	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
Q201	8-729-354-52	TRANSISTOR	2SC2545-ETZ		

Ref. No.	Part No.	Description				Remark
Q202	8-729-354-52	TRANSISTOR	2SC2545-ET2			
Q203	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2			
Q204	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2			
Q207	8-729-232-29	TRANSISTOR	2SK362-BL			
Q208	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
		< RESISTOR >				
R101	1-215-427-00	METAL	1.8K	1%	1/4W	
R103	1-215-421-00	METAL	1K	1%	1/4W	
R104	1-215-421-00	METAL	1K	1%	1/4W	
R105	1-215-405-00	METAL	220	1%	1/4W	
R105	1-247-807-31	CARBON	100	5%	1/4W	
R106	1-215-427-00	METAL	1.8K	1%	1/4W	
R108	1-215-429-00	METAL	2.2K	1%	1/4W	
R109	1-249-437-11	CARBON	47K	5%	1/4W	
R110	1-247-887-00	CARBON	220K	5%	1/4W	
R111	1-249-437-11	CARBON	47K	5%	1/4W	
R114	1-215-421-00	METAL	1K	1%	1/4W	
R115	1-215-421-00	METAL	1K	1%	1/4W	
R116	1-247-807-31	CARBON	100	5%	1/4W	
R119	1-215-411-00	METAL	390	1%	1/4W	
R120	1-215-431-00	METAL	2.7K	1%	1/4W	
R121	1-247-887-00	CARBON	220K	5%	1/4W	
R122	1-249-441-11	CARBON	100K	5%	1/4W	
R123	1-215-435-00	METAL	3.9K	1%	1/4W	
R124	1-247-807-31	CARBON	100	5%	1/4W	
R125	1-215-440-00	METAL	6.2K	1%	1/4W	
R126	1-215-440-00	METAL	6.2K	1%	1/4W	
R127	1-215-435-00	METAL	3.9K	1%	1/4W	
R128	1-215-435-00	METAL	3.9K	1%	1/4W	
R129	1-215-440-00	METAL	6.2K	1%	1/4W	
R130	1-215-435-00	METAL	3.9K	1%	1/4W	
R131	1-247-889-00	CARBON	270K	5%	1/4W	
R132	1-215-440-00	METAL	6.2K	1%	1/4W	
R133	1-249-397-11	CARBON	22	5%	1/4W	
R134	1-249-397-11	CARBON	22	5%	1/4W	
R135	1-247-887-00	CARBON	220K	5%	1/4W	
R136	1-247-887-00	CARBON	220K	5%	1/4W	
R137	1-215-437-00	METAL	4.7K	1%	1/4W	
R138	1-215-437-00	METAL	4.7K	1%	1/4W	
R140	1-249-397-11	CARBON	22	5%	1/4W	
R141	1-247-887-00	CARBON	220K	5%	1/4W	
R142	1-249-441-11	CARBON	100K	5%	1/4W	
R143	1-215-421-00	METAL	1K	1%	1/4W	
R144	1-215-421-00	METAL	1K	1%	1/4W	
R145	1-247-895-00	CARBON	470K	5%	1/4W	
R146	1-247-887-00	CARBON	220K	5%	1/4W	
R147	1-247-887-00	CARBON	220K	5%	1/4W	
R148	1-247-887-00	CARBON	220K	5%	1/4W	
R150	1-249-397-11	CARBON	22	5%	1/4W	
R151	1-215-439-00	METAL	5.6K	1%	1/4W	
R152	1-215-439-00	METAL	5.6K	1%	1/4W	
R153	1-215-449-00	METAL	15K	1%	1/4W	
R154	1-215-449-00	METAL	15K	1%	1/4W	
R155	1-247-887-00	CARBON	220K	5%	1/4W	
R156	1-249-441-11	CARBON	100K	5%	1/4W	
R157	1-249-441-11	CARBON	100K	5%	1/4W	
R158	1-249-438-11	CARBON	56K	5%	1/4W	
R159	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R160	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R161	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R162	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R170	1-249-397-11	CARBON	22	5%	1/4W	
R201	1-215-427-00	METAL	1.8K	1%	1/4W	
R202	1-249-433-11	CARBON	22K	5%	1/4W	
R203	1-215-421-00	METAL	1K	1%	1/4W	
R204	1-215-421-00	METAL	1K	1%	1/4W	
R205	1-215-405-00	METAL	220	1%	1/4W	
R205	1-247-807-31	CARBON	100	5%	1/4W	
R206	1-215-417-00	METAL	680	1%	1/4W	
R207	1-215-437-00	METAL	4.7K	1%	1/4W	
R208	1-215-437-00	METAL	4.7K	1%	1/4W	
R209	1-215-437-00	METAL	4.7K	1%	1/4W	
R210	1-247-887-00	CARBON	220K	5%	1/4W	
R211	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R212	1-212-879-11	FUSIBLE	82	5%	1/4W	F
⚠R213	1-212-879-11	FUSIBLE	82	5%	1/4W	F
R214	1-215-449-00	METAL	15K	1%	1/4W	
R222	1-249-441-11	CARBON	100K	5%	1/4W	
R223	1-215-435-00	METAL	3.9K	1%	1/4W	
R224	1-247-807-31	CARBON	100	5%	1/4W	
R225	1-215-440-00	METAL	6.2K	1%	1/4W	
R226	1-215-440-00	METAL	6.2K	1%	1/4W	
R227	1-215-435-00	METAL	3.9K	1%	1/4W	
R228	1-215-435-00	METAL	3.9K	1%	1/4W	
R229	1-215-440-00	METAL	6.2K	1%	1/4W	
R230	1-215-435-00	METAL	3.9K	1%	1/4W	
R231	1-247-889-00	CARBON	270K	5%	1/4W	
R232	1-215-440-00	METAL	6.2K	1%	1/4W	
R233	1-249-397-11	CARBON	22	5%	1/4W	
R234	1-249-397-11	CARBON	22	5%	1/4W	
R235	1-247-887-00	CARBON	220K	5%	1/4W	
R236	1-247-887-00	CARBON	220K	5%	1/4W	
R239	1-249-441-11	CARBON	100K	5%	1/4W	
R240	1-215-437-00	METAL	4.7K	1%	1/4W	
R241	1-215-437-00	METAL	4.7K	1%	1/4W	
R245	1-247-895-00	CARBON	470K	5%	1/4W	

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GP-OUT1 **GP-OUT2**

Ref. No.	Part No.	Description				Remark
		< VARIABLE RESISTOR >				
RV101	1-238-478-11	RES, ADJ, CARBON 1M				
RV201	1-238-478-11	RES, ADJ, CARBON 1M				
		< RELAY >				
RY101	1-515-787-11	RELAY				
RY102	1-515-787-11	RELAY				
**						
*	A-4588-808-A	GP-OUT2 BOARD, COMPLETE **********************				
		< CAPACITOR >				
C51	1-130-467-00	MYLAR	470PF	5%	50V	
C401	1-126-967-11	ELECT	47uF	20%	50V	
C402	1-126-967-11	ELECT	47uF	20%	50V	
C403	1-126-967-11	ELECT	47uF	20%	50V	
C404	1-126-967-11	ELECT	47uF	20%	50V	
C405	1-126-967-11	ELECT	47uF	20%	50V	
C406	1-126-967-11	ELECT	47uF	20%	50V	
C407	1-126-967-11	ELECT	47uF	20%	50V	
C408	1-124-903-11	ELECT	1uF	20%	50V	
C409	1-126-967-11	ELECT	47uF	20%	50V	
C509	1-164-159-11	CERAMIC	0.1uF		50V	
C510	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
* CN401	1-764-212-11	CONNECTOR, BOARD TO BOARD 13P				
CN402	1-564-523-11	PLUG, CONNECTOR 8P				
* CN403	1-764-212-11	CONNECTOR, BOARD TO BOARD 13P				
CN404	1-750-177-11	PIN, CONNECTOR (PC BOARD) 15P				
		< DIODE >				
D401	8-719-921-19	DIODE	1SS119-25TG			
D402	8-719-921-19	DIODE	1SS119-25TG			
D403	8-719-921-19	DIODE	1SS119-25TG			
D404	8-719-955-04	DIODE	TLG113A			
D405	8-719-802-02	DIODE	TLY113A			
D406	8-719-802-02	DIODE	TLY113A			
D407	8-719-921-19	DIODE	1SS119-25TG			
D408	8-719-921-19	DIODE	1SS119-25TG			
D409	8-719-921-19	DIODE	1SS119-25TG			
D410	8-719-110-96	DIODE	RD2.0ES-T2B2			
		< IC >				
IC401	8-759-634-51	IC	NJM4558D			
IC402	8-759-634-51	IC	NJM4558D			
IC403	8-759-634-51	IC	NJM4558D			
IC404	8-759-801-01	IC	LC4966			
IC405	8-759-916-52	IC	TC74HC165AP			
IC406	8-759-233-43	IC	TC74HC595AP			
		< TRANSISTOR >				
Q401	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q402	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q403	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q405	8-729-029-56	TRANSISTOR	DTA144ESA-TP			
Q406	8-729-029-56	TRANSISTOR	DTA144ESA-TP			
Q407	8-729-195-23	TRANSISTOR	2SA952TP-K1			
Q408	8-729-207-46	TRANSISTOR	2SC3112B-TPE2			
Q409	8-729-207-46	TRANSISTOR	2SC3112B-TPE2			
Q410	8-729-207-46	TRANSISTOR	2SC3112B-TPE2			
Q411	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q412	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q413	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q414	8-729-029-56	TRANSISTOR	DTA144ESA-TP			
Q415	8-729-029-56	TRANSISTOR	DTA144ESA-TP			
Q416	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q417	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q418	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q419	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
		< RESISTOR >				
R401	1-247-887-00	CARBON	220K	5%	1/4W	
R402	1-247-887-00	CARBON	220K	5%	1/4W	
R403	1-247-887-00	CARBON	220K	5%	1/4W	
R404	1-247-895-00	CARBON	470K	5%	1/4W	
R405	1-215-405-00	METAL	220	1%	1/4W	
R406	1-249-437-11	CARBON	47K	5%	1/4W	
R407	1-247-895-00	CARBON	470K	5%	1/4W	
R408	1-247-895-00	CARBON	470K	5%	1/4W	
R410	1-215-445-00	METAL	10K	1%	1/4W	
R411	1-215-445-00	METAL	10K	1%	1/4W	
R412	1-215-445-00	METAL	10K	1%	1/4W	
R413	1-215-437-00	METAL	4.7K	1%	1/4W	
R414	1-215-437-00	METAL	4.7K	1%	1/4W	
R415	1-215-440-00	METAL	6.2K	1%	1/4W	
R416	1-215-445-00	METAL	10K	1%	1/4W	
R417	1-215-421-00	METAL	1K	1%	1/4W	
R418	1-247-887-00	CARBON	220K	5%	1/4W	
R420	1-215-445-00	METAL	10K	1%	1/4W	
R421	1-215-445-00	METAL	10K	1%	1/4W	
⚠R422	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R423	1-249-437-11	CARBON	47K	5%	1/4W	
R424	1-249-437-11	CARBON	47K	5%	1/4W	
R425	1-249-437-11	CARBON	47K	5%	1/4W	
R426	1-249-437-11	CARBON	47K	5%	1/4W	

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Ref. No.	Part No.	Description			Remark
R427	1-215-421-00	METAL	1K	1%	1/4W
R428	1-215-421-00	METAL	1K	1%	1/4W
R429	1-249-437-11	CARBON	47K	5%	1/4W
R430	1-249-437-11	CARBON	47K	5%	1/4W
R431	1-247-887-00	CARBON	220K	5%	1/4W
R432	1-247-887-00	CARBON	220K	5%	1/4W
R433	1-247-887-00	CARBON	220K	5%	1/4W
R434	1-247-887-00	CARBON	220K	5%	1/4W
R435	1-247-887-00	CARBON	220K	5%	1/4W
R440	1-249-437-11	CARBON	47K	5%	1/4W

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description
RV401	1-225-275-11	RES, VAR, CARBON 20K

< SWITCH >

Ref. No.	Part No.	Description
SW401	1-554-824-21	SWITCH, PUSH (1 KEY)
SW402	1-554-824-21	SWITCH, PUSH (1 KEY)
SW403	1-554-824-21	SWITCH, PUSH (1 KEY)
SW404	1-572-004-11	SWITCH, PUSH
SW405	1-572-004-11	SWITCH, PUSH

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Ref. No.	Part No.	Description
*	A-4588-811-A	HP BOARD, COMPLETE ******************
*	4-921-402-01	HEAT SINK
	7-682-547-09	SCREW +B 3X6

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C301	1-107-163-00	MICA	47PF	5%	500V
C303	1-107-163-00	MICA	47PF	5%	500V
C304	1-128-552-51	ELECT	47uF	20%	63V
C306	1-128-552-51	ELECT	47uF	20%	63V
C307	1-107-597-11	MICA	22PF	5%	500V
C308	1-126-967-11	ELECT	47uF	20%	50V
C309	1-107-597-11	MICA	22PF	5%	500V
C312	1-107-597-11	MICA	22PF	5%	500V
C313	1-107-597-11	MICA	22PF	5%	500V
C316	1-130-496-00	MYLAR	0.12uF	5%	50V
C317	1-126-963-11	ELECT	4.7uF	20%	50V
C318	1-126-942-61	ELECT	1000uF	20%	25V
C319	1-126-942-61	ELECT	1000uF	20%	25V
C321	1-128-552-51	ELECT	47uF	20%	63V
C322	1-126-967-11	ELECT	47uF	20%	50V
C323	1-126-967-11	ELECT	47uF	20%	50V
C324	1-126-967-11	ELECT	47uF	20%	50V
C325	1-107-202-00	MICA	10PF	5%	500V
C326	1-126-946-11	ELECT	6800uF	20%	25V
C327	1-126-946-11	ELECT	6800uF	20%	25V
C328	1-126-967-11	ELECT	47uF	20%	50V
C329	1-126-967-11	ELECT	47uF	20%	50V
C330	1-126-946-11	ELECT	6800uF	20%	25V
C331	1-107-202-00	MICA	10PF	5%	500V
C332	1-126-946-11	ELECT	6800uF	20%	25V
C333	1-130-483-00	MYLAR	0.01uF	5%	50V
C334	1-130-483-00	MYLAR	0.01uF	5%	50V

< CONNECTOR >

Ref. No.	Part No.	Description
CN301	1-778-009-11	CONNECTOR (RECEPTACLE) 3P
CN302	1-750-860-11	CONNECTOR, BOARD TO BOARD 16P
CN303	1-750-860-11	CONNECTOR, BOARD TO BOARD 16P
CN304	1-507-796-71	JACK
CN305	1-507-796-71	JACK

< DIODE >

Ref. No.	Part No.	Description	
D301	8-719-113-56	DIODE	RD22ES-T2B2
D302	8-719-113-56	DIODE	RD22ES-T2B2
D303	8-719-113-56	DIODE	RD22ES-T2B2
D304	8-719-113-56	DIODE	RD22ES-T2B2
D305	8-719-921-19	DIODE	1SS119-25TG
D307	8-719-921-19	DIODE	1SS119-25TG
D308	8-719-921-19	DIODE	1SS119-25TG
D309	8-719-921-19	DIODE	1SS119-25TG
D310	8-719-921-19	DIODE	1SS119-25TG
D311	8-719-921-19	DIODE	1SS119-25TG
D312	8-719-921-19	DIODE	1SS119-25TG
D313	8-719-921-19	DIODE	1SS119-25TG
D314	8-719-921-19	DIODE	1SS119-25TG
D315	8-719-113-56	DIODE	RD22ES-T2B2
D316	8-719-113-56	DIODE	RD22ES-T2B2
D317	8-719-113-56	DIODE	RD22ES-T2B2
D318	8-719-113-56	DIODE	RD22ES-T2B2
D319	8-719-921-19	DIODE	1SS119-25TG
D320	8-719-921-19	DIODE	1SS119-25TG

< IC >

Ref. No.	Part No.	Description	
IC301	8-759-710-59	IC	NJM4580D-D
IC302	8-759-710-59	IC	NJM4580D-D
IC303	8-759-636-16	IC	M51957AL
IC304	8-759-710-59	IC	NJM4580D-D
IC305	8-759-710-59	IC	NJM4580D-D

< COIL >

Ref. No.	Part No.	Description
L301	1-424-090-11	COIL, LINE FILTER
L302	1-424-090-11	COIL, LINE FILTER

HP **MB**

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q301	8-729-029-56	TRANSISTOR DTA144ESA-TP	
Q302	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q303	8-729-809-29	TRANSISTOR 2SC4431-K	
Q304	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q305	8-729-195-23	TRANSISTOR 2SA952TP-K1	
Q306	8-729-809-26	TRANSISTOR 2SA1684-K	
Q307	8-729-809-29	TRANSISTOR 2SC4431-K	
Q308	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q309	8-729-195-23	TRANSISTOR 2SA952TP-K1	
Q310	8-729-809-26	TRANSISTOR 2SA1684-K	
Q311	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R301	1-215-441-00	METAL 6.8K 1% 1/4W	
R302	1-215-441-00	METAL 6.8K 1% 1/4W	
R303	1-215-437-00	METAL 4.7K 1% 1/4W	
R304	1-215-449-00	METAL 15K 1% 1/4W	
R305	1-215-400-81	METAL 130 1% 1/4W	
R306	1-215-437-00	METAL 4.7K 1% 1/4W	
R307	1-215-449-00	METAL 15K 1% 1/4W	
R308	1-215-445-00	METAL 10K 1% 1/4W	
R309	1-215-445-00	METAL 10K 1% 1/4W	
R310	1-215-437-00	METAL 4.7K 1% 1/4W	
R311	1-215-437-00	METAL 4.7K 1% 1/4W	
⚠R314	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
⚠R315	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
⚠R316	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
⚠R317	1-212-895-00	FUSIBLE 390 5% 1/4W	F
R318	1-215-449-00	METAL 15K 1% 1/4W	
R319	1-215-437-00	METAL 4.7K 1% 1/4W	
R320	1-215-445-00	METAL 10K 1% 1/4W	
R321	1-215-449-00	METAL 15K 1% 1/4W	
R322	1-215-437-00	METAL 4.7K 1% 1/4W	
⚠R323	1-212-879-11	FUSIBLE 82 5% 1/4W	F
R324	1-215-437-00	METAL 4.7K 1% 1/4W	
R325	1-215-437-00	METAL 4.7K 1% 1/4W	
R326	1-215-437-00	METAL 4.7K 1% 1/4W	
R327	1-215-437-00	METAL 4.7K 1% 1/4W	
⚠R328	1-215-933-11	METAL OXIDE 33 5% 5W	F
⚠R329	1-215-933-11	METAL OXIDE 33 5% 5W	F
R330	1-215-449-00	METAL 15K 1% 1/4W	
R331	1-215-445-00	METAL 10K 1% 1/4W	
R332	1-215-437-00	METAL 4.7K 1% 1/4W	
R333	1-215-445-00	METAL 10K 1% 1/4W	
R334	1-215-445-00	METAL 10K 1% 1/4W	
R335	1-215-437-00	METAL 4.7K 1% 1/4W	
R336	1-215-437-00	METAL 4.7K 1% 1/4W	
R337	1-215-445-00	METAL 10K 1% 1/4W	
⚠R338	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R339	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R340	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R341	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R342	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F
R343	1-215-437-00	METAL 4.7K 1% 1/4W	
R344	1-215-437-00	METAL 4.7K 1% 1/4W	
R345	1-215-437-00	METAL 4.7K 1% 1/4W	
R346	1-215-437-00	METAL 4.7K 1% 1/4W	
⚠R347	1-215-933-11	METAL OXIDE 33 5% 5W	F
⚠R348	1-215-933-11	METAL OXIDE 33 5% 5W	F
R349	1-215-449-00	METAL 15K 1% 1/4W	
R350	1-215-437-00	METAL 4.7K 1% 1/4W	
R351	1-215-445-00	METAL 10K 1% 1/4W	
R352	1-215-445-00	METAL 10K 1% 1/4W	
R353	1-215-445-00	METAL 10K 1% 1/4W	
R354	1-215-437-00	METAL 4.7K 1% 1/4W	
R355	1-215-437-00	METAL 4.7K 1% 1/4W	
R356	1-215-445-00	METAL 10K 1% 1/4W	
⚠R357	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R358	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R359	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R360	1-202-972-61	FUSIBLE 1 5% 1/4W	F
⚠R361	1-212-849-00	FUSIBLE 4.7 5% 1/4W	F

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV301	1-225-275-11	RES, VAR, CARBON 20K	
RV302	1-225-276-11	RES, VAR, CARBON 10K/10K	
RV303	1-225-269-11	RES, VAR, CARBON 50K	
RV304	1-225-276-11	RES, VAR, CARBON 10K/10K	

< RELAY >

Ref. No.	Part No.	Description	Remark
RY301	1-515-787-11	RELAY	

< SWITCH >

Ref. No.	Part No.	Description	Remark
SW301	1-572-004-11	SWITCH, PUSH	

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Ref. No.	Part No.	Description	Remark
*	1-660-908-11	MB BOARD ********	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN1	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	
CN2	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	
CN3	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	
CN4	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	
CN5	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

⚠印の部品，または⚠印付きの点線で囲まれた部品は，
安全性を維持するために重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

Ref. No.	Part No.	Description	Remark
CN6	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	
CN7	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	
CN8	1-750-859-21	CONNECTOR, BOARD TO BOARD 16P	

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Ref. No.	Part No.	Description	Remark
*	1-660-911-11	METER BOARD ***********	

< CAPACITOR >

Ref. No.	Part No.	Description				Remark
C101	1-164-159-11	CERAMIC	0.1uF		50V	
C102	1-164-159-11	CERAMIC	0.1uF		50V	
C103	1-164-159-11	CERAMIC	0.1uF		50V	
C104	1-164-159-11	CERAMIC	0.1uF		50V	
C111	1-126-923-11	ELECT	220uF	20%	10V	
C112	1-126-923-11	ELECT	220uF	20%	10V	
C113	1-126-923-11	ELECT	220uF	20%	10V	
C114	1-126-923-11	ELECT	220uF	20%	10V	
C115	1-126-923-11	ELECT	220uF	20%	10V	
C116	1-126-923-11	ELECT	220uF	20%	10V	
C117	1-126-923-11	ELECT	220uF	20%	10V	
C118	1-126-923-11	ELECT	220uF	20%	10V	
C119	1-126-923-11	ELECT	220uF	20%	10V	
C120	1-126-923-11	ELECT	220uF	20%	10V	
C121	1-126-923-11	ELECT	220uF	20%	10V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN101	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
* CN102	1-564-509-11	PLUG, CONNECTOR 6P	

< DIODE >

Ref. No.	Part No.	Description		Remark
D101	8-719-940-87	DIODE	LD-101VR	
D102	8-719-984-42	DIODE	HDSP-4830-S02	
D103	8-719-984-41	DIODE	HDSP-4850-S22	
D104	8-719-984-41	DIODE	HDSP-4850-S22	
D106	8-719-940-87	DIODE	LD-101VR	
D107	8-719-984-42	DIODE	HDSP-4830-S02	
D108	8-719-984-41	DIODE	HDSP-4850-S22	
D109	8-719-984-41	DIODE	HDSP-4850-S22	
D111	8-719-940-87	DIODE	LD-101VR	
D112	8-719-984-42	DIODE	HDSP-4830-S02	
D113	8-719-984-41	DIODE	HDSP-4850-S22	
D114	8-719-984-41	DIODE	HDSP-4850-S22	
D116	8-719-940-87	DIODE	LD-101VR	
D117	8-719-984-42	DIODE	HDSP-4830-S02	
D118	8-719-984-41	DIODE	HDSP-4850-S22	
D119	8-719-984-41	DIODE	HDSP-4850-S22	
D121	8-719-940-87	DIODE	LD-101VR	
D122	8-719-984-42	DIODE	HDSP-4830-S02	
D123	8-719-984-41	DIODE	HDSP-4850-S22	
D124	8-719-984-41	DIODE	HDSP-4850-S22	
D126	8-719-940-87	DIODE	LD-101VR	
D127	8-719-984-42	DIODE	HDSP-4830-S02	
D128	8-719-984-41	DIODE	HDSP-4850-S22	
D129	8-719-984-41	DIODE	HDSP-4850-S22	
D131	8-719-940-87	DIODE	LD-101VR	
D132	8-719-984-42	DIODE	HDSP-4830-S02	
D133	8-719-984-41	DIODE	HDSP-4850-S22	
D134	8-719-984-41	DIODE	HDSP-4850-S22	
D136	8-719-940-87	DIODE	LD-101VR	
D137	8-719-984-42	DIODE	HDSP-4830-S02	
D138	8-719-984-41	DIODE	HDSP-4850-S22	
D139	8-719-984-41	DIODE	HDSP-4850-S22	
D141	8-719-940-87	DIODE	LD-101VR	
D142	8-719-984-42	DIODE	HDSP-4830-S02	
D143	8-719-984-41	DIODE	HDSP-4850-S22	
D144	8-719-984-41	DIODE	HDSP-4850-S22	
D148	8-719-940-87	DIODE	LD-101VR	
D149	8-719-984-42	DIODE	HDSP-4830-S02	
D150	8-719-984-41	DIODE	HDSP-4850-S22	
D151	8-719-984-41	DIODE	HDSP-4850-S22	
D152	8-719-975-13	DIODE	5082-7751C	
D153	8-719-975-13	DIODE	5082-7751C	
D154	8-719-975-13	DIODE	5082-7751C	

< IC >

Ref. No.	Part No.	Description		Remark
IC101	8-759-603-19	IC	M54977P	
IC102	8-759-603-19	IC	M54977P	
IC103	8-759-603-19	IC	M54977P	
IC104	8-759-603-19	IC	M54977P	

< TRANSISTOR >

Ref. No.	Part No.	Description		Remark
Q101	8-729-822-78	TRANSISTOR	2SB1204	
Q102	8-729-822-78	TRANSISTOR	2SB1204	
Q103	8-729-822-78	TRANSISTOR	2SB1204	
Q104	8-729-822-78	TRANSISTOR	2SB1204	
Q105	8-729-822-78	TRANSISTOR	2SB1204	
Q106	8-729-822-78	TRANSISTOR	2SB1204	
Q107	8-729-822-78	TRANSISTOR	2SB1204	
Q108	8-729-822-78	TRANSISTOR	2SB1204	
Q109	8-729-822-78	TRANSISTOR	2SB1204	
Q110	8-729-822-78	TRANSISTOR	2SB1204	
Q111	8-729-822-78	TRANSISTOR	2SB1204	

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R101	1-249-401-11	CARBON	47	5%	1/4W	
R102	1-249-401-11	CARBON	47	5%	1/4W	
R103	1-249-401-11	CARBON	47	5%	1/4W	
R104	1-249-401-11	CARBON	47	5%	1/4W	

METER MN-IN1

Ref. No.	Part No.	Description			Remark
R105	1-249-401-11	CARBON	47	5%	1/4W
R106	1-249-401-11	CARBON	47	5%	1/4W
R107	1-249-401-11	CARBON	47	5%	1/4W
R108	1-249-401-11	CARBON	47	5%	1/4W
R109	1-249-401-11	CARBON	47	5%	1/4W
R110	1-249-401-11	CARBON	47	5%	1/4W
R111	1-249-401-11	CARBON	47	5%	1/4W
R121	1-249-401-11	CARBON	47	5%	1/4W
R122	1-249-401-11	CARBON	47	5%	1/4W
R123	1-249-401-11	CARBON	47	5%	1/4W
R124	1-249-401-11	CARBON	47	5%	1/4W
R125	1-249-401-11	CARBON	47	5%	1/4W
R126	1-249-401-11	CARBON	47	5%	1/4W
R127	1-249-401-11	CARBON	47	5%	1/4W
R128	1-249-401-11	CARBON	47	5%	1/4W
R129	1-249-401-11	CARBON	47	5%	1/4W
R130	1-249-401-11	CARBON	47	5%	1/4W
R131	1-249-401-11	CARBON	47	5%	1/4W
R141	1-249-401-11	CARBON	47	5%	1/4W
R142	1-249-401-11	CARBON	47	5%	1/4W
R143	1-249-401-11	CARBON	47	5%	1/4W
R144	1-249-401-11	CARBON	47	5%	1/4W
R145	1-249-401-11	CARBON	47	5%	1/4W
R146	1-249-401-11	CARBON	47	5%	1/4W
R147	1-249-401-11	CARBON	47	5%	1/4W
R148	1-249-401-11	CARBON	47	5%	1/4W
R149	1-249-401-11	CARBON	47	5%	1/4W
R150	1-249-401-11	CARBON	47	5%	1/4W
R161	1-249-401-11	CARBON	47	5%	1/4W
R162	1-249-401-11	CARBON	47	5%	1/4W
R163	1-249-401-11	CARBON	47	5%	1/4W
R164	1-249-401-11	CARBON	47	5%	1/4W
R165	1-249-401-11	CARBON	47	5%	1/4W
R166	1-249-401-11	CARBON	47	5%	1/4W
R167	1-249-401-11	CARBON	47	5%	1/4W
R168	1-249-401-11	CARBON	47	5%	1/4W
R169	1-249-401-11	CARBON	47	5%	1/4W
R170	1-249-397-11	CARBON	22	5%	1/4W
R181	1-215-445-00	METAL	10K	1%	1/4W
R182	1-215-445-00	METAL	10K	1%	1/4W
R183	1-215-445-00	METAL	10K	1%	1/4W
R184	1-215-445-00	METAL	10K	1%	1/4W
R185	1-215-445-00	METAL	10K	1%	1/4W
R186	1-215-445-00	METAL	10K	1%	1/4W
R187	1-215-445-00	METAL	10K	1%	1/4W
R188	1-215-445-00	METAL	10K	1%	1/4W
R189	1-215-445-00	METAL	10K	1%	1/4W
R190	1-215-445-00	METAL	10K	1%	1/4W

Ref. No.	Part No.	Description			Remark
R191	1-215-445-00	METAL	10K	1%	1/4W

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Ref. No.	Part No.	Description			Remark
*	A-4588-800-A	MN-IN1 BOARD, COMPLETE *********************			
*	1-560-242-11	BUS BAR 3P			
*	1-560-242-41	BUS BAR 11P			

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C1	1-107-163-00	MICA	47PF	5%	500V
C2	1-107-163-00	MICA	47PF	5%	500V
C5	1-128-552-51	ELECT	47uF	20%	63V
C6	1-128-552-51	ELECT	47uF	20%	63V
C15	1-107-597-11	MICA	22PF	5%	500V
C16	1-107-597-11	MICA	22PF	5%	500V
C17	1-126-917-11	ELECT	3300uF	20%	6.3V
C18	1-107-597-11	MICA	22PF	5%	500V
C19	1-107-597-11	MICA	22PF	5%	500V
C20	1-126-967-11	ELECT	47uF	20%	50V
C21	1-130-496-00	MYLAR	0.12uF	5%	50V
C22	1-130-496-00	MYLAR	0.12uF	5%	50V
C23	1-126-967-11	ELECT	47uF	20%	50V
C24	1-107-163-00	MICA	47PF	5%	500V
C25	1-107-163-00	MICA	47PF	5%	500V
C26	1-126-967-11	ELECT	47uF	20%	50V
C27	1-126-967-11	ELECT	47uF	20%	50V
C28	1-107-597-11	MICA	22PF	5%	500V
C29	1-107-597-11	MICA	22PF	5%	500V
C30	1-126-967-11	ELECT	47uF	20%	50V
C31	1-126-967-11	ELECT	47uF	20%	50V
C32	1-107-597-11	MICA	22PF	5%	500V
C33	1-126-967-11	ELECT	47uF	20%	50V
C34	1-126-967-11	ELECT	47uF	20%	50V
C35	1-130-481-00	MYLAR	0.0068uF	5%	50V
C36	1-130-476-00	MYLAR	0.0027uF	5%	50V
C37	1-107-597-11	MICA	22PF	5%	500V
C42	1-130-487-00	MYLAR	0.022uF	5%	50V
C43	1-130-483-00	MYLAR	0.01uF	5%	50V
C44	1-107-597-11	MICA	22PF	5%	500V
C45	1-126-967-11	ELECT	47uF	20%	50V
C46	1-107-163-00	MICA	47PF	5%	500V
C47	1-126-967-11	ELECT	47uF	20%	50V
C48	1-126-967-11	ELECT	47uF	20%	50V
C49	1-126-967-11	ELECT	47uF	20%	50V
C53	1-107-202-00	MICA	10PF	5%	500V
C54	1-126-949-11	ELECT	220uF	20%	35V
C55	1-126-949-11	ELECT	220uF	20%	35V
C64	1-126-967-11	ELECT	47uF	20%	50V
C70	1-126-949-11	ELECT	220uF	20%	35V

Ref. No.	Part No.	Description	Remark
C71	1-130-467-00	MYLAR 470PF 5% 50V	
C201	1-126-942-61	ELECT 1000uF 20% 25V	
C202	1-126-942-61	ELECT 1000uF 20% 25V	
C216	1-107-597-11	MICA 22PF 5% 500V	
C217	1-130-477-00	MYLAR 0.0033uF 5% 50V	
C218	1-124-903-11	ELECT 1uF 20% 50V	
C219	1-130-492-11	MYLAR 0.056uF 5% 50V	
C220	1-126-949-11	ELECT 220uF 20% 35V	
C221	1-126-967-11	ELECT 47uF 20% 50V	
C222	1-126-941-11	ELECT 470uF 20% 25V	
C223	1-126-967-11	ELECT 47uF 20% 50V	
C224	1-128-553-11	ELECT 220uF 20% 63V	
		< CONNECTOR >	
* CN1	1-573-991-11	PIN, CONNECTOR (PC BOARD) 50P	
* CN3	1-764-211-11	CONNECTOR, BOARD TO BOARD 13P	
CN4	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P	
* CN5	1-764-211-11	CONNECTOR, BOARD TO BOARD 13P	
CN6	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P	
CN7	1-750-973-11	JACK (LARGE TYPE) (2-GANG)(INPUT B/INSER	
CN8	1-580-041-11	JACK, LARGE (2 GANG)(DIRECT OUT/INSERT I	
CN9	1-537-865-11	TERMINAL (M3)	
CN10	1-778-009-11	CONNECTOR (RECEPTACLE) 3P (INPUT A)	
* CN15	1-564-507-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D1	8-719-113-56	DIODE RD22ES-T2B2	
D2	8-719-113-56	DIODE RD22ES-T2B2	
D3	8-719-113-56	DIODE RD22ES-T2B2	
D4	8-719-113-56	DIODE RD22ES-T2B2	
D9	8-719-921-19	DIODE 1SS119-25TG	
D10	8-719-921-19	DIODE 1SS119-25TG	
D11	8-719-921-19	DIODE 1SS119-25TG	
D12	8-719-921-19	DIODE 1SS119-25TG	
D13	8-719-921-19	DIODE 1SS119-25TG	
D14	8-719-113-56	DIODE RD22ES-T2B2	
D15	8-719-113-56	DIODE RD22ES-T2B2	
D16	8-719-113-56	DIODE RD22ES-T2B2	
D17	8-719-921-19	DIODE 1SS119-25TG	
D18	8-719-113-56	DIODE RD22ES-T2B2	
D19	8-719-921-19	DIODE 1SS119-25TG	
D20	8-719-113-56	DIODE RD22ES-T2B2	
D21	8-719-113-56	DIODE RD22ES-T2B2	
D22	8-719-921-19	DIODE 1SS119-25TG	
D23	8-719-921-19	DIODE 1SS119-25TG	
D24	8-719-921-19	DIODE 1SS119-25TG	
D25	8-719-109-85	DIODE RD5.1ES-T2B	
D26	8-719-109-85	DIODE RD5.1ES-T2B	

Ref. No.	Part No.	Description	Remark
		< IC >	
IC1	8-759-710-59	IC NJM4580D-D	
IC2	8-759-710-59	IC NJM4580D-D	
IC3	8-759-710-59	IC NJM4580D-D	
IC4	8-759-710-59	IC NJM4580D-D	
IC5	8-759-710-59	IC NJM4580D-D	
IC6	8-759-710-59	IC NJM4580D-D	
IC7	8-759-710-59	IC NJM4580D-D	
IC8	8-759-710-59	IC NJM4580D-D	
IC9	8-759-710-59	IC NJM4580D-D	
		< COIL >	
L1	1-424-090-11	COIL, LINE FILTER	
L2	1-424-090-11	COIL, LINE FILTER	
L3	1-424-090-11	COIL, LINE FILTER	
L4	1-424-090-11	COIL, LINE FILTER	
L6	1-424-090-11	COIL, LINE FILTER	
		< TRANSISTOR >	
Q1	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q2	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q3	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q4	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q5	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q6	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q7	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q8	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q12	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q13	8-729-232-29	TRANSISTOR 2SK362-BL	
Q14	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q15	8-729-232-29	TRANSISTOR 2SK362-BL	
		< RESISTOR >	
R1	1-215-441-00	METAL 6.8K 1% 1/4W	
R2	1-215-441-00	METAL 6.8K 1% 1/4W	
R4	1-249-437-11	CARBON 47K 5% 1/4W	
R5	1-249-437-11	CARBON 47K 5% 1/4W	
R8	1-249-435-11	CARBON 33K 5% 1/4W	
R9	1-249-435-11	CARBON 33K 5% 1/4W	
R12	1-249-413-11	CARBON 470 5% 1/4W	
R13	1-249-413-11	CARBON 470 5% 1/4W	
R14	1-215-421-00	METAL 1K 1% 1/4W	
R15	1-215-421-00	METAL 1K 1% 1/4W	
R16	1-215-421-00	METAL 1K 1% 1/4W	
R17	1-215-421-00	METAL 1K 1% 1/4W	
R18	1-215-405-00	METAL 220 1% 1/4W	
R19	1-215-405-00	METAL 220 1% 1/4W	
R22	1-215-439-00	METAL 5.6K 1% 1/4W	

MN-IN1

Ref. No.	Part No.	Description				Remark
R23	1-215-439-00	METAL	5.6K	1%	1/4W	
R26	1-215-434-00	METAL	3.6K	1%	1/4W	
R27	1-215-434-00	METAL	3.6K	1%	1/4W	
R28	1-247-887-00	CARBON	220K	5%	1/4W	
R29	1-215-437-00	METAL	4.7K	1%	1/4W	
R30	1-215-437-00	METAL	4.7K	1%	1/4W	
R31	1-215-437-00	METAL	4.7K	1%	1/4W	
R32	1-247-887-00	CARBON	220K	5%	1/4W	
R33	1-215-445-00	METAL	10K	1%	1/4W	
R35	1-247-887-00	CARBON	220K	5%	1/4W	
R36	1-247-887-00	CARBON	220K	5%	1/4W	
R37	1-215-447-00	METAL	12K	1%	1/4W	
R38	1-215-447-00	METAL	12K	1%	1/4W	
R39	1-215-429-00	METAL	2.2K	1%	1/4W	
R40	1-215-429-00	METAL	2.2K	1%	1/4W	
R41	1-215-403-00	METAL	180	1%	1/4W	
R42	1-215-403-00	METAL	180	1%	1/4W	
R43	1-215-432-00	METAL	3K	1%	1/4W	
R44	1-215-432-00	METAL	3K	1%	1/4W	
R45	1-247-887-00	CARBON	220K	5%	1/4W	
R46	1-215-437-00	METAL	4.7K	1%	1/4W	
R47	1-215-437-00	METAL	4.7K	1%	1/4W	
R48	1-247-887-00	CARBON	220K	5%	1/4W	
R51	1-215-434-00	METAL	3.6K	1%	1/4W	
R52	1-215-434-00	METAL	3.6K	1%	1/4W	
R53	1-215-437-00	METAL	4.7K	1%	1/4W	
R54	1-215-437-00	METAL	4.7K	1%	1/4W	
R66	1-215-436-00	METAL	4.3K	1%	1/4W	
R67	1-215-436-00	METAL	4.3K	1%	1/4W	
R68	1-215-437-00	METAL	4.7K	1%	1/4W	
R69	1-215-437-00	METAL	4.7K	1%	1/4W	
R70	1-247-887-00	CARBON	220K	5%	1/4W	
R71	1-249-397-11	CARBON	22	5%	1/4W	
R73	1-247-887-00	CARBON	220K	5%	1/4W	
R74	1-247-887-00	CARBON	220K	5%	1/4W	
R75	1-247-887-00	CARBON	220K	5%	1/4W	
R76	1-249-437-11	CARBON	47K	5%	1/4W	
R78	1-215-421-00	METAL	1K	1%	1/4W	
R79	1-215-421-00	METAL	1K	1%	1/4W	
R80	1-247-807-31	CARBON	100	5%	1/4W	
R81	1-215-427-00	METAL	1.8K	1%	1/4W	
R83	1-215-421-00	METAL	1K	1%	1/4W	
R84	1-247-887-00	CARBON	220K	5%	1/4W	
R85	1-249-419-11	CARBON	1.5K	5%	1/4W	
R86	1-247-843-11	CARBON	3.3K	5%	1/4W	
R88	1-249-419-11	CARBON	1.5K	5%	1/4W	
R89	1-247-843-11	CARBON	3.3K	5%	1/4W	
R91	1-215-437-00	METAL	4.7K	1%	1/4W	
R92	1-215-437-00	METAL	4.7K	1%	1/4W	
R94	1-215-437-00	METAL	4.7K	1%	1/4W	
R95	1-215-437-00	METAL	4.7K	1%	1/4W	
R97	1-215-438-00	METAL	5.1K	1%	1/4W	
R98	1-215-427-00	METAL	1.8K	1%	1/4W	
R100	1-247-887-00	CARBON	220K	5%	1/4W	
R101	1-247-887-00	CARBON	220K	5%	1/4W	
R102	1-249-397-11	CARBON	22	5%	1/4W	
R113	1-247-895-00	CARBON	470K	5%	1/4W	
R114	1-215-437-00	METAL	4.7K	1%	1/4W	
R115	1-215-437-00	METAL	4.7K	1%	1/4W	
R116	1-215-437-00	METAL	4.7K	1%	1/4W	
R117	1-215-437-00	METAL	4.7K	1%	1/4W	
R118	1-215-437-00	METAL	4.7K	1%	1/4W	
R119	1-215-437-00	METAL	4.7K	1%	1/4W	
R120	1-215-437-00	METAL	4.7K	1%	1/4W	
R121	1-215-437-00	METAL	4.7K	1%	1/4W	
R122	1-215-437-00	METAL	4.7K	1%	1/4W	
R123	1-215-437-00	METAL	4.7K	1%	1/4W	
R124	1-215-437-00	METAL	4.7K	1%	1/4W	
R125	1-215-437-00	METAL	4.7K	1%	1/4W	
R126	1-215-437-00	METAL	4.7K	1%	1/4W	
R127	1-215-437-00	METAL	4.7K	1%	1/4W	
R128	1-215-437-00	METAL	4.7K	1%	1/4W	
R129	1-215-437-00	METAL	4.7K	1%	1/4W	
R130	1-215-437-00	METAL	4.7K	1%	1/4W	
R131	1-215-437-00	METAL	4.7K	1%	1/4W	
R132	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R133	1-212-875-00	FUSIBLE	56	5%	1/4W	F
R134	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R201	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R202	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R203	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R204	1-212-895-00	FUSIBLE	390	5%	1/4W	F
R205	1-247-895-00	CARBON	470K	5%	1/4W	
R206	1-215-434-00	METAL	3.6K	1%	1/4W	
R207	1-215-434-00	METAL	3.6K	1%	1/4W	
R208	1-215-434-00	METAL	3.6K	1%	1/4W	
R209	1-215-434-00	METAL	3.6K	1%	1/4W	
R210	1-247-895-00	CARBON	470K	5%	1/4W	
R211	1-215-437-00	METAL	4.7K	1%	1/4W	
R212	1-215-437-00	METAL	4.7K	1%	1/4W	
R213	1-215-445-00	METAL	10K	1%	1/4W	
R214	1-215-435-00	METAL	3.9K	1%	1/4W	
R215	1-215-445-00	METAL	10K	1%	1/4W	
R216	1-215-435-00	METAL	3.9K	1%	1/4W	
R217	1-215-445-00	METAL	10K	1%	1/4W	
R218	1-247-895-00	CARBON	470K	5%	1/4W	

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Ref. No.	Part No.	Description	Remark
R219	1-247-895-00	CARBON 470K 5% 1/4W	
R220	1-247-887-00	CARBON 220K 5% 1/4W	
R221	1-247-887-00	CARBON 220K 5% 1/4W	
R222	1-247-895-00	CARBON 470K 5% 1/4W	
R223	1-215-400-81	METAL 130 1% 1/4W	
R224	1-215-437-00	METAL 4.7K 1% 1/4W	
R225	1-249-432-11	CARBON 18K 5% 1/4W	
R226	1-215-437-00	METAL 4.7K 1% 1/4W	
⚠R227	1-212-879-11	FUSIBLE 82 5% 1/4W	F
R228	1-249-441-11	CARBON 100K 5% 1/4W	
R234	1-215-445-00	METAL 10K 1% 1/4W	
		< VARIABLE RESISTOR >	
RV1	1-225-264-11	RES, VAR, CARBON 5K/5K	
RV3	1-225-265-11	RES, VAR, CARBON	
RV5	1-225-266-11	RES, VAR, CARBON 100K/100K (MID HIGH FRE	
RV6	1-225-268-11	RES, VAR, CARBON 10K (MID HIGH LEVEL)	
RV7	1-225-266-11	RES, VAR, CARBON 100K/100K (MID LOW LEVE	
RV8	1-225-268-11	RES, VAR, CARBON 10K	
RV20	1-228-989-00	RES, ADJ, METAL 470	
RV21	1-228-989-00	RES, ADJ, METAL 470	
RV22	1-225-268-11	RES, VAR, CARBON 10K (HIGH LEVEL)	
RV23	1-225-268-11	RES, VAR, CARBON 10K (LOW LEVEL)	
		< RELAY >	
RY1	1-515-787-11	RELAY	
		< SWITCH >	
SW1	1-572-004-11	SWITCH, PUSH (R)	
SW2	1-572-004-11	SWITCH, PUSH (GP2)	
SW3	1-572-004-11	SWITCH, PUSH (GP4)	
SW4	1-572-004-11	SWITCH, PUSH (GP6)	
SW5	1-572-004-11	SWITCH, PUSH (GP8)	
SW6	1-572-004-11	SWITCH, PUSH	
SW7	1-572-004-11	SWITCH, PUSH (φ)	
SW8	1-572-004-11	SWITCH, PUSH (LCF)	
SW9	1-572-004-11	SWITCH, PUSH (EQ)	
SW23	1-570-707-21	SWITCH, SLIDE (INPUT B LEVEL)	

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Ref. No.	Part No.	Description	Remark
*	1-660-906-11	MN-IN2 BOARD	
		************	
		< CONNECTOR >	
* CN16	1-764-212-11	CONNECTOR, BOARD TO BOARD 13P	
CN17	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P	
		< RESISTOR >	
R229	1-249-391-11	CARBON 6.8 5% 1/4W	
R230	1-215-445-00	METAL 10K 1% 1/4W	
R231	1-215-405-00	METAL 220 1% 1/4W	
R232	1-215-427-00	METAL 1.8K 1% 1/4W	
R233	1-249-435-11	CARBON 33K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV24	1-225-272-11	RES, VAR, CARBON 20K/2K	
		< SWITCH >	
SW15	1-572-004-11	SWITCH, PUSH	
SW16	1-572-004-11	SWITCH, PUSH	
SW17	1-572-004-11	SWITCH, PUSH	
SW18	1-572-004-11	SWITCH, PUSH	
SW19	1-572-004-11	SWITCH, PUSH	
SW20	1-572-004-11	SWITCH, PUSH	
SW21	1-572-004-11	SWITCH, PUSH	
SW22	1-572-004-11	SWITCH, PUSH	

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Ref. No.	Part No.	Description	Remark
*	A-4588-821-A	MTX-OUT1 BOARD, COMPLETE	
		***********************	
*	1-560-242-21	BUS BAR 4P	
*	1-560-242-41	BUS BAR 11P	
	1-564-952-21	PIN, CONNECTOR 16P	
		< CAPACITOR >	
C601	1-107-163-00	MICA 47PF 5% 500V	
C602	1-107-163-00	MICA 47PF 5% 500V	
C603	1-126-967-11	ELECT 47uF 20% 50V	
C604	1-126-967-11	ELECT 47uF 20% 50V	
C605	1-107-597-11	MICA 22PF 5% 500V	
C606	1-107-597-11	MICA 22PF 5% 500V	
C607	1-126-967-11	ELECT 47uF 20% 50V	
C611	1-107-163-00	MICA 47PF 5% 500V	
C612	1-107-163-00	MICA 47PF 5% 500V	
C613	1-126-967-11	ELECT 47uF 20% 50V	
C614	1-126-967-11	ELECT 47uF 20% 50V	
C615	1-107-597-11	MICA 22PF 5% 500V	
C616	1-107-597-11	MICA 22PF 5% 500V	
C617	1-126-967-11	ELECT 47uF 20% 50V	
C620	1-126-967-11	ELECT 47uF 20% 50V	
C622	1-126-967-11	ELECT 47uF 20% 50V	
C624	1-126-967-11	ELECT 47uF 20% 50V	
C626	1-126-967-11	ELECT 47uF 20% 50V	
C628	1-126-967-11	ELECT 47uF 20% 50V	
C630	1-126-967-11	ELECT 47uF 20% 50V	

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MTX-OUT1

Ref. No.	Part No.	Description	Remark
C632	1-126-967-11	ELECT 47uF 20% 50V	
C634	1-126-967-11	ELECT 47uF 20% 50V	
C636	1-126-967-11	ELECT 47uF 20% 50V	
C638	1-126-967-11	ELECT 47uF 20% 50V	
C645	1-126-942-61	ELECT 1000uF 20% 25V	
C646	1-126-942-61	ELECT 1000uF 20% 25V	
C647	1-126-967-11	ELECT 47uF 20% 50V	
C650	1-126-941-11	ELECT 470uF 20% 25V	
C651	1-126-967-11	ELECT 47uF 20% 50V	
C652	1-126-967-11	ELECT 47uF 20% 50V	
C653	1-107-202-00	MICA 10PF 5% 500V	
C654	1-126-941-11	ELECT 470uF 20% 25V	
C655	1-126-967-11	ELECT 47uF 20% 50V	
C660	1-126-967-11	ELECT 47uF 20% 50V	
C661	1-107-597-11	MICA 22PF 5% 500V	
C662	1-126-941-11	ELECT 470uF 20% 25V	
C663	1-107-202-00	MICA 10PF 5% 500V	
C664	1-126-941-11	ELECT 470uF 20% 25V	
C670	1-124-903-11	ELECT 1uF 20% 50V	
C671	1-126-967-11	ELECT 47uF 20% 50V	
C673	1-124-903-11	ELECT 1uF 20% 50V	
C674	1-130-467-00	MYLAR 470PF 5% 50V	
		< CONNECTOR >	
CN601	1-537-865-11	TERMINAL (M3)	
CN602	1-750-973-11	JACK (LARGE TYPE) (2 GANG)	
* CN603	1-565-730-11	PIN, CONNECTOR(RIGHT ANGLE)34P	
CN605	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P	
CN606	1-778-008-11	CONNECTOR (PLUG) 3P	
CN608	1-778-008-11	CONNECTOR (PLUG) 3P	
* CN609	1-764-211-11	CONNECTOR, BOARD TO BOARD 13P	
* CN610	1-564-519-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D601	8-719-921-19	DIODE 1SS119-25TG	
D602	8-719-921-19	DIODE 1SS119-25TG	
D603	8-719-921-19	DIODE 1SS119-25TG	
D604	8-719-820-77	DIODE TLSG116	
D605	8-719-955-04	DIODE TLG113A	
D606	8-719-802-02	DIODE TLY113A	
D607	8-719-921-19	DIODE 1SS119-25TG	
D608	8-719-921-19	DIODE 1SS119-25TG	
D609	8-719-921-19	DIODE 1SS119-25TG	
D610	8-719-921-19	DIODE 1SS119-25TG	
D611	8-719-113-56	DIODE RD22ES-T2B2	
D612	8-719-113-56	DIODE RD22ES-T2B2	
D613	8-719-113-56	DIODE RD22ES-T2B2	
D614	8-719-113-56	DIODE RD22ES-T2B2	
D621	8-719-113-56	DIODE RD22ES-T2B2	

Ref. No.	Part No.	Description	Remark
D622	8-719-113-56	DIODE RD22ES-T2B2	
D623	8-719-113-56	DIODE RD22ES-T2B2	
D624	8-719-113-56	DIODE RD22ES-T2B2	
D625	8-719-110-96	DIODE RD2.0ES-T2B2	
D626	8-719-921-19	DIODE 1SS119-25TG	
D627	8-719-921-19	DIODE 1SS119-25TG	
D628	8-719-113-56	DIODE RD22ES-T2B2	
D629	8-719-113-56	DIODE RD22ES-T2B2	
D630	8-719-113-56	DIODE RD22ES-T2B2	
D631	8-719-113-56	DIODE RD22ES-T2B2	
D632	8-719-113-56	DIODE RD22ES-T2B2	
D633	8-719-113-56	DIODE RD22ES-T2B2	
D634	8-719-113-56	DIODE RD22ES-T2B2	
D635	8-719-113-56	DIODE RD22ES-T2B2	
D636	8-719-921-19	DIODE 1SS119-25TG	
D638	8-719-921-19	DIODE 1SS119-25TG	
		< IC >	
IC601	8-759-710-59	IC NJM4580D-D	
IC602	8-759-710-59	IC NJM4580D-D	
IC603	8-759-710-59	IC NJM4580D-D	
IC604	8-759-710-59	IC NJM4580D-D	
IC605	8-759-710-59	IC NJM4580D-D	
IC606	8-759-710-59	IC NJM4580D-D	
IC607	8-759-710-59	IC NJM4580D-D	
IC608	8-759-710-59	IC NJM4580D-D	
IC609	8-759-634-51	IC NJM4558D	
		< COIL >	
L601	1-424-090-11	COIL, LINE FILTER	
L602	1-424-090-11	COIL, LINE FILTER	
L611	1-424-090-11	COIL, LINE FILTER	
L612	1-424-090-11	COIL, LINE FILTER	
		< TRANSISTOR >	
Q601	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q602	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q604	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q605	8-729-195-23	TRANSISTOR 2SA952TP-K1	
Q606	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q607	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q608	8-729-195-23	TRANSISTOR 2SA952TP-K1	
Q609	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q610	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q611	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q612	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q613	8-729-207-46	TRANSISTOR 2SC3112B-TPE2	
Q614	8-729-030-03	TRANSISTOR DTC144ESA-TP	

Ref. No.	Part No.	Description				Remark
Q615	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q616	8-729-232-29	TRANSISTOR	2SK362-BL			
Q617	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q618	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2			
Q619	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2			
		< RESISTOR >				
R601	1-215-441-00	METAL	6.8K	1%	1/4W	
R602	1-215-441-00	METAL	6.8K	1%	1/4W	
R603	1-215-436-00	METAL	4.3K	1%	1/4W	
R604	1-247-895-00	CARBON	470K	5%	1/4W	
R605	1-247-887-00	CARBON	220K	5%	1/4W	
R606	1-215-436-00	METAL	4.3K	1%	1/4W	
R607	1-215-437-00	METAL	4.7K	1%	1/4W	
R609	1-215-449-00	METAL	15K	1%	1/4W	
R610	1-215-437-00	METAL	4.7K	1%	1/4W	
R611	1-215-441-00	METAL	6.8K	1%	1/4W	
R612	1-215-441-00	METAL	6.8K	1%	1/4W	
R613	1-215-436-00	METAL	4.3K	1%	1/4W	
⚠R614	1-212-879-11	FUSIBLE	82	5%	1/4W	F
⚠R615	1-212-879-11	FUSIBLE	82	5%	1/4W	F
R616	1-215-436-00	METAL	4.3K	1%	1/4W	
R617	1-247-889-00	CARBON	270K	5%	1/4W	
R618	1-215-427-00	METAL	1.8K	1%	1/4W	
R619	1-247-887-00	CARBON	220K	5%	1/4W	
R620	1-247-887-00	CARBON	220K	5%	1/4W	
R621	1-247-887-00	CARBON	220K	5%	1/4W	
R622	1-247-887-00	CARBON	220K	5%	1/4W	
R623	1-247-887-00	CARBON	220K	5%	1/4W	
R624	1-247-887-00	CARBON	220K	5%	1/4W	
R625	1-247-887-00	CARBON	220K	5%	1/4W	
R626	1-247-887-00	CARBON	220K	5%	1/4W	
R627	1-247-887-00	CARBON	220K	5%	1/4W	
R628	1-247-887-00	CARBON	220K	5%	1/4W	
R629	1-249-441-11	CARBON	100K	5%	1/4W	
R630	1-215-437-00	METAL	4.7K	1%	1/4W	
R631	1-215-437-00	METAL	4.7K	1%	1/4W	
R632	1-215-437-00	METAL	4.7K	1%	1/4W	
R633	1-215-437-00	METAL	4.7K	1%	1/4W	
R634	1-215-437-00	METAL	4.7K	1%	1/4W	
R635	1-215-437-00	METAL	4.7K	1%	1/4W	
R636	1-215-437-00	METAL	4.7K	1%	1/4W	
R637	1-215-437-00	METAL	4.7K	1%	1/4W	
R638	1-215-437-00	METAL	4.7K	1%	1/4W	
R639	1-215-437-00	METAL	4.7K	1%	1/4W	
R640	1-215-437-00	METAL	4.7K	1%	1/4W	
R641	1-215-437-00	METAL	4.7K	1%	1/4W	
R642	1-249-397-11	CARBON	22	5%	1/4W	
R643	1-249-438-11	CARBON	56K	5%	1/4W	
R644	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R645	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R646	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R647	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R648	1-215-449-00	METAL	15K	1%	1/4W	
R649	1-215-449-00	METAL	15K	1%	1/4W	
R651	1-215-447-00	METAL	12K	1%	1/4W	
R652	1-215-429-00	METAL	2.2K	1%	1/4W	
R653	1-249-433-11	CARBON	22K	5%	1/4W	
R655	1-249-397-11	CARBON	22	5%	1/4W	
R656	1-215-421-00	METAL	1K	1%	1/4W	
R657	1-215-421-00	METAL	1K	1%	1/4W	
R658	1-247-807-31	CARBON	100	5%	1/4W	
R659	1-215-431-00	METAL	2.7K	1%	1/4W	
R660	1-215-421-00	METAL	1K	1%	1/4W	
R661	1-215-421-00	METAL	1K	1%	1/4W	
R662	1-215-411-00	METAL	390	1%	1/4W	
R663	1-247-887-00	CARBON	220K	5%	1/4W	
R664	1-247-887-00	CARBON	220K	5%	1/4W	
R665	1-215-435-00	METAL	3.9K	1%	1/4W	
R666	1-247-807-31	CARBON	100	5%	1/4W	
R667	1-215-440-00	METAL	6.2K	1%	1/4W	
R668	1-215-440-00	METAL	6.2K	1%	1/4W	
R669	1-215-435-00	METAL	3.9K	1%	1/4W	
R670	1-249-397-11	CARBON	22	5%	1/4W	
R671	1-247-887-00	CARBON	220K	5%	1/4W	
R672	1-215-435-00	METAL	3.9K	1%	1/4W	
R673	1-215-440-00	METAL	6.2K	1%	1/4W	
R674	1-215-435-00	METAL	3.9K	1%	1/4W	
⚠R675	1-212-875-00	FUSIBLE	56	5%	1/4W	F
R676	1-215-440-00	METAL	6.2K	1%	1/4W	
R677	1-249-397-11	CARBON	22	5%	1/4W	
R678	1-247-887-00	CARBON	220K	5%	1/4W	
R679	1-247-895-00	CARBON	470K	5%	1/4W	
R680	1-247-895-00	CARBON	470K	5%	1/4W	
R681	1-249-435-11	CARBON	33K	5%	1/4W	
R682	1-215-449-00	METAL	15K	1%	1/4W	
R683	1-215-421-00	METAL	1K	1%	1/4W	
R684	1-215-449-00	METAL	15K	1%	1/4W	
R685	1-247-887-00	CARBON	220K	5%	1/4W	
R686	1-215-449-00	METAL	15K	1%	1/4W	
R687	1-249-437-11	CARBON	47K	5%	1/4W	
R688	1-215-449-00	METAL	15K	1%	1/4W	
⚠R689	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R690	1-249-437-11	CARBON	47K	5%	1/4W	
R691	1-249-437-11	CARBON	47K	5%	1/4W	
R692	1-249-437-11	CARBON	47K	5%	1/4W	
R693	1-249-437-11	CARBON	47K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

MTX-OUT1 MTX-OUT2

Ref. No.	Part No.	Description			Remark
R694	1-215-445-00	METAL	10K	1%	1/4W
R695	1-247-887-00	CARBON	220K	5%	1/4W
R696	1-215-421-00	METAL	1K	1%	1/4W
R697	1-247-887-00	CARBON	220K	5%	1/4W
R698	1-249-441-11	CARBON	100K	5%	1/4W
R699	1-215-421-00	METAL	1K	1%	1/4W

< VARIABLE RESISTOR >

RV601	1-225-269-11	RES, VAR, CARBON 50K
RV602	1-225-269-11	RES, VAR, CARBON 50K
RV603	1-225-269-11	RES, VAR, CARBON 50K
RV604	1-225-269-11	RES, VAR, CARBON 50K
RV605	1-225-269-11	RES, VAR, CARBON 50K
RV606	1-225-269-11	RES, VAR, CARBON 50K
RV607	1-225-269-11	RES, VAR, CARBON 50K
RV608	1-225-269-11	RES, VAR, CARBON 50K
RV609	1-225-269-11	RES, VAR, CARBON 50K
RV610	1-225-269-11	RES, VAR, CARBON 50K
RV611	1-225-269-11	RES, VAR, CARBON 50K
RV612	1-225-269-11	RES, VAR, CARBON 50K
RV613	1-225-275-11	RES, VAR, CARBON 20K
RV614	1-238-478-11	RES, ADJ, CARBON 1M

< RELAY >

RY601	1-515-787-11	RELAY
RY602	1-515-787-11	RELAY

< SWITCH >

SW601	1-554-824-21	SWITCH, PUSH (1 KEY)
SW602	1-554-824-21	SWITCH, PUSH (1 KEY)

****

*	A-4588-822-A	MTX-OUT2 BOARD, COMPLETE

****

< CAPACITOR >

C701	1-126-941-11	ELECT	470uF	20%	25V
C702	1-126-967-11	ELECT	47uF	20%	50V
C703	1-126-967-11	ELECT	47uF	20%	50V
C704	1-126-941-11	ELECT	470uF	20%	25V
C705	1-107-202-00	MICA	10PF	5%	500V
C706	1-126-967-11	ELECT	47uF	20%	50V
C710	1-126-967-11	ELECT	47uF	20%	50V
C711	1-107-597-11	MICA	22PF	5%	500V
C712	1-126-941-11	ELECT	470uF	20%	25V
C713	1-107-202-00	MICA	10PF	5%	500V
C714	1-126-941-11	ELECT	470uF	20%	25V
C715	1-126-967-11	ELECT	47uF	20%	50V

Ref. No.	Part No.	Description			Remark
C720	1-124-903-11	ELECT	1uF	20%	50V
C721	1-126-967-11	ELECT	47uF	20%	50V
C723	1-124-903-11	ELECT	1uF	20%	50V
C730	1-164-159-11	CERAMIC	0.1uF		50V
C731	1-164-159-11	CERAMIC	0.1uF		50V
C733	1-126-942-61	ELECT	1000uF	20%	25V
C734	1-126-942-61	ELECT	1000uF	20%	25V
C735	1-130-467-00	MYLAR	470PF	5%	50V
C736	1-130-467-00	MYLAR	470PF	5%	50V

< CONNECTOR >

CN701	1-569-338-11	CONNECTOR, BOARD TO BOARD 19P
* CN702	1-764-212-11	CONNECTOR, BOARD TO BOARD 13P
CN703	1-564-523-11	PLUG, CONNECTOR 8P
CN704	1-564-523-11	PLUG, CONNECTOR 8P

< DIODE >

D701	8-719-921-19	DIODE	1SS119-25TG
D702	8-719-921-19	DIODE	1SS119-25TG
D703	8-719-921-19	DIODE	1SS119-25TG
D704	8-719-921-19	DIODE	1SS119-25TG
D705	8-719-921-19	DIODE	1SS119-25TG
D706	8-719-921-19	DIODE	1SS119-25TG
D707	8-719-820-77	DIODE	TLSG116
D708	8-719-955-04	DIODE	TLG113A
D709	8-719-802-02	DIODE	TLY113A
D710	8-719-921-19	DIODE	1SS119-25TG
D711	8-719-921-19	DIODE	1SS119-25TG
D712	8-719-921-19	DIODE	1SS119-25TG
D713	8-719-110-96	DIODE	RD2.0ES-T2B2
D714	8-719-921-19	DIODE	1SS119-25TG

< IC >

IC701	8-759-710-59	IC	NJM4580D-D
IC703	8-759-634-51	IC	NJM4558D
IC704	8-759-710-59	IC	NJM4580D-D
IC705	8-759-916-52	IC	TC74HC165AP
IC706	8-759-233-43	IC	TC74HC595AP

< TRANSISTOR >

Q701	8-729-354-52	TRANSISTOR	2SC2545-ETZ
Q702	8-729-354-52	TRANSISTOR	2SC2545-ETZ
Q703	8-729-030-03	TRANSISTOR	DTC144ESA-TP
Q704	8-729-030-03	TRANSISTOR	DTC144ESA-TP
Q705	8-729-232-29	TRANSISTOR	2SK362-BL
Q706	8-729-207-46	TRANSISTOR	2SC3112B-TPE2
Q707	8-729-195-23	TRANSISTOR	2SA952TP-K1
Q708	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2
Q709	8-729-207-46	TRANSISTOR	2SC3112B-TPE2

Ref. No.	Part No.	Description				Remark
Q710	8-729-195-23	TRANSISTOR	2SA952TP-K1			
Q711	8-729-207-46	TRANSISTOR	2SC3112B-TPE2			
Q712	8-729-207-46	TRANSISTOR	2SC3112B-TPE2			
Q713	8-729-207-46	TRANSISTOR	2SC3112B-TPE2			
Q714	8-729-207-46	TRANSISTOR	2SC3112B-TPE2			
Q715	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q716	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q717	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2			
Q720	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q721	8-729-029-56	TRANSISTOR	DTA144ESA-TP			
Q722	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q723	8-729-029-56	TRANSISTOR	DTA144ESA-TP			

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R701	1-215-437-00	METAL	4.7K	1%	1/4W	
R702	1-215-437-00	METAL	4.7K	1%	1/4W	
R703	1-215-437-00	METAL	4.7K	1%	1/4W	
R704	1-215-437-00	METAL	4.7K	1%	1/4W	
R705	1-215-437-00	METAL	4.7K	1%	1/4W	
R706	1-215-437-00	METAL	4.7K	1%	1/4W	
R707	1-215-437-00	METAL	4.7K	1%	1/4W	
R708	1-215-437-00	METAL	4.7K	1%	1/4W	
R709	1-215-437-00	METAL	4.7K	1%	1/4W	
R710	1-215-437-00	METAL	4.7K	1%	1/4W	
R711	1-215-437-00	METAL	4.7K	1%	1/4W	
R712	1-215-437-00	METAL	4.7K	1%	1/4W	
R714	1-215-447-00	METAL	12K	1%	1/4W	
R715	1-215-429-00	METAL	2.2K	1%	1/4W	
R717	1-249-433-11	CARBON	22K	5%	1/4W	
R718	1-215-427-00	METAL	1.8K	1%	1/4W	
R721	1-215-421-00	METAL	1K	1%	1/4W	
R722	1-215-421-00	METAL	1K	1%	1/4W	
R723	1-247-807-31	CARBON	100	5%	1/4W	
R724	1-215-411-00	METAL	390	1%	1/4W	
R725	1-215-431-00	METAL	2.7K	1%	1/4W	
R726	1-247-887-00	CARBON	220K	5%	1/4W	
R730	1-247-895-00	CARBON	470K	5%	1/4W	
R731	1-247-887-00	CARBON	220K	5%	1/4W	
R740	1-249-441-11	CARBON	100K	5%	1/4W	
R741	1-215-435-00	METAL	3.9K	1%	1/4W	
R742	1-247-807-31	CARBON	100	5%	1/4W	
R743	1-215-440-00	METAL	6.2K	1%	1/4W	
R744	1-215-440-00	METAL	6.2K	1%	1/4W	
R745	1-215-435-00	METAL	3.9K	1%	1/4W	
R746	1-249-397-11	CARBON	22	5%	1/4W	
R747	1-247-887-00	CARBON	220K	5%	1/4W	
R748	1-215-435-00	METAL	3.9K	1%	1/4W	
R749	1-215-435-00	METAL	3.9K	1%	1/4W	
R750	1-247-889-00	CARBON	270K	5%	1/4W	
R751	1-215-440-00	METAL	6.2K	1%	1/4W	
R752	1-215-440-00	METAL	6.2K	1%	1/4W	
R753	1-249-397-11	CARBON	22	5%	1/4W	
R754	1-247-887-00	CARBON	220K	5%	1/4W	
R760	1-247-895-00	CARBON	470K	5%	1/4W	
R761	1-247-895-00	CARBON	470K	5%	1/4W	
R762	1-249-435-11	CARBON	33K	5%	1/4W	
R763	1-215-449-00	METAL	15K	1%	1/4W	
R764	1-215-421-00	METAL	1K	1%	1/4W	
R765	1-215-449-00	METAL	15K	1%	1/4W	
R766	1-247-887-00	CARBON	220K	5%	1/4W	
R767	1-215-449-00	METAL	15K	1%	1/4W	
R768	1-249-437-11	CARBON	47K	5%	1/4W	
R769	1-215-449-00	METAL	15K	1%	1/4W	
⚠R770	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R771	1-249-437-11	CARBON	47K	5%	1/4W	
R772	1-249-437-11	CARBON	47K	5%	1/4W	
R773	1-249-437-11	CARBON	47K	5%	1/4W	
R774	1-249-437-11	CARBON	47K	5%	1/4W	
R775	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R776	1-212-879-11	FUSIBLE	82	5%	1/4W	F
R780	1-215-445-00	METAL	10K	1%	1/4W	
R781	1-247-887-00	CARBON	220K	5%	1/4W	
R782	1-215-421-00	METAL	1K	1%	1/4W	
R783	1-247-895-00	CARBON	470K	5%	1/4W	
R784	1-249-441-11	CARBON	100K	5%	1/4W	
R785	1-215-421-00	METAL	1K	1%	1/4W	
R786	1-247-887-00	CARBON	220K	5%	1/4W	
R789	1-249-437-11	CARBON	47K	5%	1/4W	
R790	1-249-437-11	CARBON	47K	5%	1/4W	
R791	1-249-437-11	CARBON	47K	5%	1/4W	
R792	1-249-437-11	CARBON	47K	5%	1/4W	
R793	1-249-437-11	CARBON	47K	5%	1/4W	
R794	1-215-421-00	METAL	1K	1%	1/4W	
R795	1-215-421-00	METAL	1K	1%	1/4W	
⚠R796	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R797	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R798	1-212-875-00	FUSIBLE	56	5%	1/4W	F
R799	1-249-437-11	CARBON	47K	5%	1/4W	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV701	1-225-269-11	RES, VAR, CARBON 50K	
RV702	1-225-269-11	RES, VAR, CARBON 50K	
RV703	1-225-269-11	RES, VAR, CARBON 50K	
RV704	1-225-269-11	RES, VAR, CARBON 50K	
RV705	1-225-269-11	RES, VAR, CARBON 50K	
RV706	1-225-269-11	RES, VAR, CARBON 50K	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。 従って交換時は，必ず指定の部品を使用して下さい。

MTX-OUT2 ST-IN

Ref. No.	Part No.	Description			Remark
RV707	1-225-269-11	RES, VAR, CARBON 50K			
RV708	1-225-269-11	RES, VAR, CARBON 50K			
RV709	1-225-269-11	RES, VAR, CARBON 50K			
RV710	1-225-269-11	RES, VAR, CARBON 50K			
RV711	1-225-269-11	RES, VAR, CARBON 50K			
RV712	1-225-269-11	RES, VAR, CARBON 50K			
RV713	1-225-275-11	RES, VAR, CARBON 20K			
RV720	1-238-478-11	RES, ADJ, CARBON 1M			

< RELAY >

Ref. No.	Part No.	Description
RY701	1-515-787-11	RELAY

< SWITCH >

Ref. No.	Part No.	Description
SW701	1-554-824-21	SWITCH, PUSH (1 KEY)
SW702	1-554-824-21	SWITCH, PUSH (1 KEY)

****

Ref. No.	Part No.	Description
*	A-4588-803-A	ST-IN BOARD, COMPLETE ********************
*	1-560-242-11	BUS BAR 3P
	1-565-083-11	BAR, BUS

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C101	1-107-163-00	MICA	47PF	5%	500V
C102	1-107-163-00	MICA	47PF	5%	500V
C103	1-126-967-11	ELECT	47uF	20%	50V
C104	1-126-967-11	ELECT	47uF	20%	50V
C112	1-107-597-11	MICA	22PF	5%	500V
C116	1-126-941-11	ELECT	470uF	20%	25V
C117	1-107-597-11	MICA	22PF	5%	500V
C120	1-107-597-11	MICA	22PF	5%	500V
C121	1-107-597-11	MICA	22PF	5%	500V
C122	1-126-967-11	ELECT	47uF	20%	50V
C123	1-107-597-11	MICA	22PF	5%	500V
C124	1-126-967-11	ELECT	47uF	20%	50V
C125	1-130-482-00	MYLAR	0.0082uF	5%	50V
C126	1-130-477-00	MYLAR	0.0033uF	5%	50V
C127	1-130-492-11	MYLAR	0.056uF	5%	50V
C130	1-130-477-00	MYLAR	0.0033uF	5%	50V
C131	1-124-903-11	ELECT	1uF	20%	50V
C132	1-107-202-00	MICA	10PF	5%	500V
C134	1-126-967-11	ELECT	47uF	20%	50V
C135	1-107-163-00	MICA	47PF	5%	500V
C138	1-126-967-11	ELECT	47uF	20%	50V
C140	1-107-597-11	MICA	22PF	5%	500V
C141	1-126-967-11	ELECT	47uF	20%	50V
C142	1-126-967-11	ELECT	47uF	20%	50V
C143	1-107-597-11	MICA	22PF	5%	500V
C150	1-126-967-11	ELECT	47uF	20%	50V
C153	1-126-941-11	ELECT	470uF	20%	25V
C158	1-126-949-11	ELECT	220uF	20%	35V
C201	1-107-163-00	MICA	47PF	5%	500V
C202	1-107-163-00	MICA	47PF	5%	500V
C203	1-126-967-11	ELECT	47uF	20%	50V
C204	1-126-967-11	ELECT	47uF	20%	50V
C212	1-107-597-11	MICA	22PF	5%	500V
C216	1-126-941-11	ELECT	470uF	20%	25V
C217	1-107-597-11	MICA	22PF	5%	500V
C220	1-107-597-11	MICA	22PF	5%	500V
C221	1-107-597-11	MICA	22PF	5%	500V
C222	1-126-967-11	ELECT	47uF	20%	50V
C223	1-107-597-11	MICA	22PF	5%	500V
C224	1-126-967-11	ELECT	47uF	20%	50V
C225	1-130-482-00	MYLAR	0.0082uF	5%	50V
C226	1-130-477-00	MYLAR	0.0033uF	5%	50V
C227	1-130-492-11	MYLAR	0.056uF	5%	50V
C230	1-130-477-00	MYLAR	0.0033uF	5%	50V
C231	1-124-903-11	ELECT	1uF	20%	50V
C232	1-107-202-00	MICA	10PF	5%	500V
C234	1-126-967-11	ELECT	47uF	20%	50V
C235	1-107-163-00	MICA	47PF	5%	500V
C238	1-126-967-11	ELECT	47uF	20%	50V
C240	1-107-597-11	MICA	22PF	5%	500V
C241	1-126-967-11	ELECT	47uF	20%	50V
C242	1-126-967-11	ELECT	47uF	20%	50V
C243	1-107-597-11	MICA	22PF	5%	500V
C250	1-126-967-11	ELECT	47uF	20%	50V
C253	1-126-941-11	ELECT	470uF	20%	25V
C258	1-126-949-11	ELECT	220uF	20%	35V
C306	1-126-967-11	ELECT	47uF	20%	50V
C330	1-126-967-11	ELECT	47uF	20%	50V
C331	1-126-942-61	ELECT	1000uF	20%	25V
C332	1-126-942-61	ELECT	1000uF	20%	25V

< CONNECTOR >

Ref. No.	Part No.	Description
* CN1	1-573-991-11	PIN, CONNECTOR (PC BOARD) 50P
* CN3	1-764-211-11	CONNECTOR, BOARD TO BOARD 13P
CN4	1-569-341-11	CONNECTOR, BOARD TO BOARD 19P
CN9	1-537-865-11	TERMINAL (M3)
CN15	1-564-511-11	PLUG, CONNECTOR 8P
CN101	1-778-009-11	CONNECTOR (RECEPTACLE) 3P
CN201	1-778-009-11	CONNECTOR (RECEPTACLE) 3P
CN301	1-569-181-11	JACK, PIN 2P

< DIODE >

Ref. No.	Part No.	Description	
D101	8-719-113-56	DIODE	RD22ES-T2B2
D102	8-719-113-56	DIODE	RD22ES-T2B2

Ref. No.	Part No.	Description	Remark
D103	8-719-113-56	DIODE RD22ES-T2B2	
D104	8-719-113-56	DIODE RD22ES-T2B2	
D105	8-719-921-19	DIODE 1SS119-25TG	
D106	8-719-921-19	DIODE 1SS119-25TG	
D107	8-719-921-19	DIODE 1SS119-25TG	
D108	8-719-921-19	DIODE 1SS119-25TG	
D109	8-719-921-19	DIODE 1SS119-25TG	
D110	8-719-921-19	DIODE 1SS119-25TG	
D111	8-719-921-19	DIODE 1SS119-25TG	
D112	8-719-113-56	DIODE RD22ES-T2B2	
D113	8-719-113-56	DIODE RD22ES-T2B2	
D201	8-719-113-56	DIODE RD22ES-T2B2	
D202	8-719-113-56	DIODE RD22ES-T2B2	
D203	8-719-113-56	DIODE RD22ES-T2B2	
D204	8-719-113-56	DIODE RD22ES-T2B2	
D205	8-719-921-19	DIODE 1SS119-25TG	
D210	8-719-921-19	DIODE 1SS119-25TG	
D211	8-719-921-19	DIODE 1SS119-25TG	
D212	8-719-113-56	DIODE RD22ES-T2B2	
D213	8-719-113-56	DIODE RD22ES-T2B2	
D302	8-719-921-19	DIODE 1SS119-25TG	
D303	8-719-109-85	DIODE RD5.1ES-T2B	
D304	8-719-109-85	DIODE RD5.1ES-T2B	
D305	8-719-109-85	DIODE RD5.1ES-T2B	
D306	8-719-109-85	DIODE RD5.1ES-T2B	

< IC >

Ref. No.	Part No.	Description	Remark
IC101	8-759-710-59	IC NJM4580D-D	
IC102	8-759-710-59	IC NJM4580D-D	
IC201	8-759-710-59	IC NJM4580D-D	
IC202	8-759-710-59	IC NJM4580D-D	
IC301	8-759-710-59	IC NJM4580D-D	
IC302	8-759-710-59	IC NJM4580D-D	
IC303	8-759-710-59	IC NJM4580D-D	
IC304	8-759-710-59	IC NJM4580D-D	
IC305	8-759-710-59	IC NJM4580D-D	
IC306	8-759-710-59	IC NJM4580D-D	
IC307	8-759-710-59	IC NJM4580D-D	
IC308	8-759-710-59	IC NJM4580D-D	

< COIL >

Ref. No.	Part No.	Description	Remark
L101	1-424-090-11	COIL, LINE FILTER	
L102	1-424-090-11	COIL, LINE FILTER	
L103	1-424-090-11	COIL, LINE FILTER	
L201	1-424-090-11	COIL, LINE FILTER	
L202	1-424-090-11	COIL, LINE FILTER	
L203	1-424-090-11	COIL, LINE FILTER	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q101	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q102	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q103	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q104	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q105	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q106	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q107	8-729-232-29	TRANSISTOR 2SK362-BL	
Q108	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q109	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q201	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q202	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q203	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q204	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	
Q205	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q206	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q207	8-729-232-29	TRANSISTOR 2SK362-BL	
Q208	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q209	8-729-354-52	TRANSISTOR 2SC2545-ETZ	
Q301	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q302	8-729-119-78	TRANSISTOR 2SC1815Y-TPE2	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R101	1-215-447-00	METAL 12K 1% 1/4W	
R102	1-247-887-00	CARBON 220K 5% 1/4W	
R103	1-247-887-00	CARBON 220K 5% 1/4W	
R105	1-249-437-11	CARBON 47K 5% 1/4W	
R106	1-249-437-11	CARBON 47K 5% 1/4W	
R108	1-249-436-11	CARBON 39K 5% 1/4W	
R110	1-215-421-00	METAL 1K 1% 1/4W	
R111	1-215-405-00	METAL 220 1% 1/4W	
R112	1-249-413-11	CARBON 470 5% 1/4W	
R113	1-215-421-00	METAL 1K 1% 1/4W	
R115	1-249-436-11	CARBON 39K 5% 1/4W	
R116	1-215-421-00	METAL 1K 1% 1/4W	
R117	1-215-405-00	METAL 220 1% 1/4W	
R118	1-215-421-00	METAL 1K 1% 1/4W	
R119	1-249-413-11	CARBON 470 5% 1/4W	
R120	1-215-439-00	METAL 5.6K 1% 1/4W	
R121	1-215-405-00	METAL 220 1% 1/4W	
R122	1-215-439-00	METAL 5.6K 1% 1/4W	
R124	1-215-434-00	METAL 3.6K 1% 1/4W	
R125	1-215-434-00	METAL 3.6K 1% 1/4W	
R126	1-215-434-00	METAL 3.6K 1% 1/4W	
R127	1-215-434-00	METAL 3.6K 1% 1/4W	
R129	1-247-887-00	CARBON 220K 5% 1/4W	
R131	1-215-427-00	METAL 1.8K 1% 1/4W	
R133	1-215-438-00	METAL 5.1K 1% 1/4W	

ST-IN

Ref. No.	Part No.	Description			Remark
R134	1-215-438-00	METAL	5.1K	1%	1/4W
R135	1-215-437-00	METAL	4.7K	1%	1/4W
R136	1-215-437-00	METAL	4.7K	1%	1/4W
R137	1-215-445-00	METAL	10K	1%	1/4W
R138	1-215-435-00	METAL	3.9K	1%	1/4W
R139	1-215-445-00	METAL	10K	1%	1/4W
R140	1-215-437-00	METAL	4.7K	1%	1/4W
R141	1-215-437-00	METAL	4.7K	1%	1/4W
R142	1-215-445-00	METAL	10K	1%	1/4W
R143	1-215-445-00	METAL	10K	1%	1/4W
R144	1-215-435-00	METAL	3.9K	1%	1/4W
R145	1-215-445-00	METAL	10K	1%	1/4W
R146	1-247-887-00	CARBON	220K	5%	1/4W
R147	1-247-887-00	CARBON	220K	5%	1/4W
R148	1-247-887-00	CARBON	220K	5%	1/4W
R149	1-215-434-00	METAL	3.6K	1%	1/4W
R150	1-215-427-00	METAL	1.8K	1%	1/4W
R151	1-215-434-00	METAL	3.6K	1%	1/4W
R152	1-249-436-11	CARBON	39K	5%	1/4W
R153	1-247-895-00	CARBON	470K	5%	1/4W
R155	1-215-431-00	METAL	2.7K	1%	1/4W
R156	1-247-895-00	CARBON	470K	5%	1/4W
R157	1-247-887-00	CARBON	220K	5%	1/4W
R158	1-215-437-00	METAL	4.7K	1%	1/4W
R159	1-215-437-00	METAL	4.7K	1%	1/4W
R160	1-247-895-00	CARBON	470K	5%	1/4W
R162	1-249-441-11	CARBON	100K	5%	1/4W
R163	1-249-437-11	CARBON	47K	5%	1/4W
R165	1-215-421-00	METAL	1K	1%	1/4W
R166	1-247-807-31	CARBON	100	5%	1/4W
R167	1-215-437-00	METAL	4.7K	1%	1/4W
R168	1-215-400-81	METAL	130	1%	1/4W
R169	1-215-421-00	METAL	1K	1%	1/4W
R171	1-249-419-11	CARBON	1.5K	5%	1/4W
R172	1-247-843-11	CARBON	3.3K	5%	1/4W
R174	1-215-421-00	METAL	1K	1%	1/4W
R175	1-247-895-00	CARBON	470K	5%	1/4W
R176	1-247-895-00	CARBON	470K	5%	1/4W
R177	1-247-895-00	CARBON	470K	5%	1/4W
R185	1-215-437-00	METAL	4.7K	1%	1/4W
R186	1-215-437-00	METAL	4.7K	1%	1/4W
R187	1-215-437-00	METAL	4.7K	1%	1/4W
R188	1-215-437-00	METAL	4.7K	1%	1/4W
R189	1-215-437-00	METAL	4.7K	1%	1/4W
R190	1-215-437-00	METAL	4.7K	1%	1/4W
R191	1-215-437-00	METAL	4.7K	1%	1/4W
R192	1-215-437-00	METAL	4.7K	1%	1/4W
R193	1-215-437-00	METAL	4.7K	1%	1/4W
R194	1-215-437-00	METAL	4.7K	1%	1/4W
R201	1-215-447-00	METAL	12K	1%	1/4W
R202	1-247-887-00	CARBON	220K	5%	1/4W
R203	1-247-887-00	CARBON	220K	5%	1/4W
R205	1-249-437-11	CARBON	47K	5%	1/4W
R206	1-249-437-11	CARBON	47K	5%	1/4W
R208	1-249-436-11	CARBON	39K	5%	1/4W
R210	1-215-421-00	METAL	1K	1%	1/4W
R211	1-215-405-00	METAL	220	1%	1/4W
R212	1-249-413-11	CARBON	470	5%	1/4W
R213	1-215-421-00	METAL	1K	1%	1/4W
R215	1-249-436-11	CARBON	39K	5%	1/4W
R216	1-215-421-00	METAL	1K	1%	1/4W
R217	1-215-405-00	METAL	220	1%	1/4W
R218	1-215-421-00	METAL	1K	1%	1/4W
R219	1-249-413-11	CARBON	470	5%	1/4W
R220	1-215-439-00	METAL	5.6K	1%	1/4W
R221	1-215-405-00	METAL	220	1%	1/4W
R222	1-215-439-00	METAL	5.6K	1%	1/4W
R224	1-215-434-00	METAL	3.6K	1%	1/4W
R225	1-215-434-00	METAL	3.6K	1%	1/4W
R226	1-215-434-00	METAL	3.6K	1%	1/4W
R227	1-215-434-00	METAL	3.6K	1%	1/4W
R229	1-247-887-00	CARBON	220K	5%	1/4W
R231	1-215-427-00	METAL	1.8K	1%	1/4W
R233	1-215-438-00	METAL	5.1K	1%	1/4W
R234	1-215-438-00	METAL	5.1K	1%	1/4W
R235	1-215-437-00	METAL	4.7K	1%	1/4W
R236	1-215-437-00	METAL	4.7K	1%	1/4W
R237	1-215-445-00	METAL	10K	1%	1/4W
R238	1-215-435-00	METAL	3.9K	1%	1/4W
R239	1-215-445-00	METAL	10K	1%	1/4W
R240	1-215-437-00	METAL	4.7K	1%	1/4W
R241	1-215-437-00	METAL	4.7K	1%	1/4W
R242	1-215-445-00	METAL	10K	1%	1/4W
R243	1-215-445-00	METAL	10K	1%	1/4W
R244	1-215-435-00	METAL	3.9K	1%	1/4W
R245	1-215-445-00	METAL	10K	1%	1/4W
R246	1-247-887-00	CARBON	220K	5%	1/4W
R247	1-247-887-00	CARBON	220K	5%	1/4W
R248	1-247-887-00	CARBON	220K	5%	1/4W
R249	1-215-434-00	METAL	3.6K	1%	1/4W
R250	1-215-427-00	METAL	1.8K	1%	1/4W
R251	1-215-434-00	METAL	3.6K	1%	1/4W
R252	1-249-436-11	CARBON	39K	5%	1/4W
R255	1-215-431-00	METAL	2.7K	1%	1/4W
R256	1-247-895-00	CARBON	470K	5%	1/4W
R257	1-247-887-00	CARBON	220K	5%	1/4W
R258	1-215-437-00	METAL	4.7K	1%	1/4W

Ref. No.	Part No.	Description				Remark
R259	1-215-437-00	METAL	4.7K	1%	1/4W	
R260	1-247-895-00	CARBON	470K	5%	1/4W	
R262	1-249-441-11	CARBON	100K	5%	1/4W	
R263	1-249-437-11	CARBON	47K	5%	1/4W	
R265	1-215-421-00	METAL	1K	1%	1/4W	
R266	1-247-807-31	CARBON	100	5%	1/4W	
R267	1-215-437-00	METAL	4.7K	1%	1/4W	
R268	1-215-400-81	METAL	130	1%	1/4W	
R269	1-215-421-00	METAL	1K	1%	1/4W	
R271	1-249-419-11	CARBON	1.5K	5%	1/4W	
R272	1-247-843-11	CARBON	3.3K	5%	1/4W	
R274	1-215-421-00	METAL	1K	1%	1/4W	
R285	1-215-437-00	METAL	4.7K	1%	1/4W	
R286	1-215-437-00	METAL	4.7K	1%	1/4W	
R287	1-215-437-00	METAL	4.7K	1%	1/4W	
R288	1-215-437-00	METAL	4.7K	1%	1/4W	
R289	1-215-437-00	METAL	4.7K	1%	1/4W	
R290	1-215-437-00	METAL	4.7K	1%	1/4W	
R291	1-215-437-00	METAL	4.7K	1%	1/4W	
R292	1-215-437-00	METAL	4.7K	1%	1/4W	
R293	1-215-437-00	METAL	4.7K	1%	1/4W	
R294	1-215-437-00	METAL	4.7K	1%	1/4W	
R301	1-215-438-00	METAL	5.1K	1%	1/4W	
R302	1-215-438-00	METAL	5.1K	1%	1/4W	
R303	1-215-434-00	METAL	3.6K	1%	1/4W	
R304	1-215-437-00	METAL	4.7K	1%	1/4W	
R305	1-215-437-00	METAL	4.7K	1%	1/4W	
R306	1-247-887-00	CARBON	220K	5%	1/4W	
R307	1-247-895-00	CARBON	470K	5%	1/4W	
⚠R309	1-212-879-11	FUSIBLE	82	5%	1/4W	F
R310	1-215-437-00	METAL	4.7K	1%	1/4W	
R311	1-215-445-00	METAL	10K	1%	1/4W	
R312	1-215-445-00	METAL	10K	1%	1/4W	
R313	1-215-431-00	METAL	2.7K	1%	1/4W	
R315	1-215-438-00	METAL	5.1K	1%	1/4W	
R316	1-215-438-00	METAL	5.1K	1%	1/4W	
R317	1-215-434-00	METAL	3.6K	1%	1/4W	
⚠R330	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R331	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R332	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R334	1-249-436-11	CARBON	39K	5%	1/4W	
R335	1-215-434-00	METAL	3.6K	1%	1/4W	
R336	1-215-445-00	METAL	10K	1%	1/4W	
R337	1-215-437-00	METAL	4.7K	1%	1/4W	
R338	1-215-437-00	METAL	4.7K	1%	1/4W	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV103	1-228-989-00	RES, ADJ, METAL 470	
RV203	1-228-989-00	RES, ADJ, METAL 470	
RV301	1-225-274-11	RES, VAR, CARBON 20K/20K	
RV302	1-225-264-11	RES, VAR, CARBON 5K/5K	
RV303	1-225-267-11	RES, VAR, CARBON 10K/10K	
RV304	1-225-267-11	RES, VAR, CARBON 10K/10K	
RV305	1-225-270-11	RES, VAR, CARBON 100KX4	
RV315	1-225-267-11	RES, VAR, CARBON 10K/10K	

< RELAY >

RY301	1-515-787-11	RELAY	

< SWITCH >

SW301	1-572-004-11	SWITCH, PUSH	
SW303	1-572-004-11	SWITCH, PUSH	
SW304	1-572-004-11	SWITCH, PUSH	
SW305	1-572-004-11	SWITCH, PUSH	
SW306	1-572-004-11	SWITCH, PUSH	
SW307	1-572-004-11	SWITCH, PUSH	
SW308	1-572-004-11	SWITCH, PUSH	
SW309	1-572-004-11	SWITCH, PUSH	

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*	A-4587-525-A	ST-OUT BOARD, COMPLETE **********************	
*	1-560-242-21	BUS BAR 4P	
*	1-560-242-41	BUS BAR 11P	
*	1-560-242-91	BUS BAR 10P	

< CAPACITOR >

C608	1-126-967-11	ELECT	47uF	20%	50V
C609	1-126-967-11	ELECT	47uF	20%	50V
C610	1-126-967-11	ELECT	47uF	20%	50V
C612	1-126-941-11	ELECT	470uF	20%	25V
C613	1-126-967-11	ELECT	47uF	20%	50V
C614	1-126-949-11	ELECT	220uF	20%	35V
C618	1-107-597-11	MICA	22PF	5%	500V
C619	1-107-202-00	MICA	10PF	5%	500V
C620	1-107-597-11	MICA	22PF	5%	500V
C628	1-107-202-00	MICA	10PF	5%	500V
C630	1-126-941-11	ELECT	470uF	20%	25V
C635	1-126-967-11	ELECT	47uF	20%	50V
C636	1-126-967-11	ELECT	47uF	20%	50V
C638	1-126-967-11	ELECT	47uF	20%	50V
C639	1-107-163-00	MICA	47PF	5%	500V
C640	1-126-967-11	ELECT	47uF	20%	50V
C641	1-126-941-11	ELECT	470uF	20%	25V
C644	1-126-967-11	ELECT	47uF	20%	50V
C645	1-107-597-11	MICA	22PF	5%	500V
C646	1-107-202-00	MICA	10PF	5%	500V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。従って交換時は，必ず指定の部品を使用して下さい。

ST-OUT

Ref. No.	Part No.	Description			Remark
C647	1-126-941-11	ELECT	470uF	20%	25V
C651	1-126-967-11	ELECT	47uF	20%	50V
C652	1-126-967-11	ELECT	47uF	20%	50V
C653	1-126-967-11	ELECT	47uF	20%	50V
C654	1-126-942-61	ELECT	1000uF	20%	25V
C655	1-126-942-61	ELECT	1000uF	20%	25V
C658	1-126-949-11	ELECT	220uF	20%	35V
C659	1-126-967-11	ELECT	47uF	20%	50V
C660	1-107-202-00	MICA	10PF	5%	500V
C661	1-126-967-11	ELECT	47uF	20%	50V
C662	1-126-967-11	ELECT	47uF	20%	50V
C670	1-130-467-00	MYLAR	470PF	5%	50V
		< CONNECTOR >			
* CN1	1-573-991-11	PIN, CONNECTOR (PC BOARD) 50P			
CN601	1-750-860-11	CONNECTOR, BOARD TO BOARD 16P			
* CN602	1-565-730-11	PIN, CONNECTOR(RIGHT ANGLE)34P			
* CN603	1-564-507-11	PLUG, CONNECTOR 4P			
* CN604	1-564-519-11	PLUG, CONNECTOR 4P			
CN605	1-778-008-11	CONNECTOR (PLUG) 3P			
CN606	1-778-008-11	CONNECTOR (PLUG) 3P			
CN607	1-537-865-11	TERMINAL (M3)			
CN608	1-580-041-11	JACK, LARGE (2 GANG)			
CN611	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN613	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN615	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN616	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN619	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN620	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN621	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN623	1-537-862-11	TERMINAL, TAB (187 TYPE)			
CN625	1-750-860-11	CONNECTOR, BOARD TO BOARD 16P			
		< DIODE >			
D601	8-719-921-19	DIODE	1SS119-25TG		
D603	8-719-921-19	DIODE	1SS119-25TG		
D604	8-719-921-19	DIODE	1SS119-25TG		
D605	8-719-113-56	DIODE	RD22ES-T2B2		
D606	8-719-113-56	DIODE	RD22ES-T2B2		
D607	8-719-113-56	DIODE	RD22ES-T2B2		
D608	8-719-113-56	DIODE	RD22ES-T2B2		
D609	8-719-921-19	DIODE	1SS119-25TG		
D610	8-719-113-56	DIODE	RD22ES-T2B2		
D611	8-719-113-56	DIODE	RD22ES-T2B2		
D612	8-719-113-56	DIODE	RD22ES-T2B2		
D613	8-719-113-56	DIODE	RD22ES-T2B2		
D614	8-719-113-56	DIODE	RD22ES-T2B2		
D615	8-719-113-56	DIODE	RD22ES-T2B2		
D616	8-719-113-56	DIODE	RD22ES-T2B2		
D617	8-719-113-56	DIODE	RD22ES-T2B2		
D618	8-719-200-82	DIODE	11ES2		
D619	8-719-200-82	DIODE	11ES2		
D620	8-719-200-82	DIODE	11ES2		
D621	8-719-200-82	DIODE	11ES2		
		< IC >			
IC601	8-759-710-59	IC	NJM4580D-D		
IC602	8-759-710-59	IC	NJM4580D-D		
IC603	8-759-710-59	IC	NJM4580D-D		
IC604	8-759-710-59	IC	NJM4580D-D		
IC605	8-759-710-59	IC	NJM4580D-D		
IC606	8-759-801-01	IC	LC4966		
		< COIL >			
L602	1-424-090-11	COIL, LINE FILTER			
		< TRANSISTOR >			
Q601	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q602	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q603	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q604	8-729-354-52	TRANSISTOR	2SC2545-ETZ		
Q605	8-729-029-56	TRANSISTOR	DTA144ESA-TP		
Q606	8-729-029-56	TRANSISTOR	DTA144ESA-TP		
Q607	8-729-029-56	TRANSISTOR	DTA144ESA-TP		
Q609	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2		
Q610	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2		
Q611	8-729-119-78	TRANSISTOR	2SC1815Y-TPE2		
		< RESISTOR >			
R602	1-215-421-00	METAL	1K	1%	1/4W
R603	1-215-421-00	METAL	1K	1%	1/4W
R604	1-215-421-00	METAL	1K	1%	1/4W
R605	1-215-421-00	METAL	1K	1%	1/4W
R606	1-215-435-00	METAL	3.9K	1%	1/4W
R607	1-247-807-31	CARBON	100	5%	1/4W
R608	1-215-440-00	METAL	6.2K	1%	1/4W
R609	1-247-807-31	CARBON	100	5%	1/4W
R610	1-247-807-31	CARBON	100	5%	1/4W
R612	1-249-397-11	CARBON	22	5%	1/4W
R615	1-215-429-00	METAL	2.2K	1%	1/4W
R616	1-249-437-11	CARBON	47K	5%	1/4W
R618	1-215-431-00	METAL	2.7K	1%	1/4W
R619	1-247-887-00	CARBON	220K	5%	1/4W
R622	1-215-411-00	METAL	390	1%	1/4W
R623	1-247-887-00	CARBON	220K	5%	1/4W
R624	1-249-437-11	CARBON	47K	5%	1/4W
R625	1-215-440-00	METAL	6.2K	1%	1/4W

Ref. No.	Part No.	Description				Remark
R628	1-215-435-00	METAL	3.9K	1%	1/4W	
R630	1-247-887-00	CARBON	220K	5%	1/4W	
R631	1-215-435-00	METAL	3.9K	1%	1/4W	
R633	1-247-887-00	CARBON	220K	5%	1/4W	
R635	1-215-440-00	METAL	6.2K	1%	1/4W	
R637	1-215-437-00	METAL	4.7K	1%	1/4W	
R638	1-249-397-11	CARBON	22	5%	1/4W	
R639	1-215-435-00	METAL	3.9K	1%	1/4W	
R641	1-215-440-00	METAL	6.2K	1%	1/4W	
R642	1-215-435-00	METAL	3.9K	1%	1/4W	
R643	1-247-807-31	CARBON	100	5%	1/4W	
R645	1-215-440-00	METAL	6.2K	1%	1/4W	
R647	1-249-397-11	CARBON	22	5%	1/4W	
R649	1-247-887-00	CARBON	220K	5%	1/4W	
R650	1-247-887-00	CARBON	220K	5%	1/4W	
R651	1-247-887-00	CARBON	220K	5%	1/4W	
R654	1-247-887-00	CARBON	220K	5%	1/4W	
R655	1-247-887-00	CARBON	220K	5%	1/4W	
R657	1-247-887-00	CARBON	220K	5%	1/4W	
R658	1-215-440-00	METAL	6.2K	1%	1/4W	
R659	1-215-435-00	METAL	3.9K	1%	1/4W	
R660	1-247-895-00	CARBON	470K	5%	1/4W	
R661	1-247-895-00	CARBON	470K	5%	1/4W	
R662	1-215-435-00	METAL	3.9K	1%	1/4W	
R663	1-247-887-00	CARBON	220K	5%	1/4W	
R664	1-215-440-00	METAL	6.2K	1%	1/4W	
R665	1-249-397-11	CARBON	22	5%	1/4W	
R666	1-215-435-00	METAL	3.9K	1%	1/4W	
R668	1-215-440-00	METAL	6.2K	1%	1/4W	
R669	1-249-438-11	CARBON	56K	5%	1/4W	
R670	1-215-449-00	METAL	15K	1%	1/4W	
R671	1-249-397-11	CARBON	22	5%	1/4W	
R674	1-215-437-00	METAL	4.7K	1%	1/4W	
R675	1-215-437-00	METAL	4.7K	1%	1/4W	
R676	1-247-887-00	CARBON	220K	5%	1/4W	
R678	1-249-414-11	CARBON	560	5%	1/4W	
R679	1-249-414-11	CARBON	560	5%	1/4W	
R680	1-249-414-11	CARBON	560	5%	1/4W	
R681	1-249-414-11	CARBON	560	5%	1/4W	
R682	1-249-414-11	CARBON	560	5%	1/4W	
R683	1-249-414-11	CARBON	560	5%	1/4W	
R684	1-249-414-11	CARBON	560	5%	1/4W	
R685	1-249-414-11	CARBON	560	5%	1/4W	
R686	1-215-445-00	METAL	10K	1%	1/4W	
R687	1-215-445-00	METAL	10K	1%	1/4W	
R688	1-215-445-00	METAL	10K	1%	1/4W	
R689	1-215-445-00	METAL	10K	1%	1/4W	
R690	1-215-445-00	METAL	10K	1%	1/4W	

Ref. No.	Part No.	Description				Remark
R691	1-215-445-00	METAL	10K	1%	1/4W	
R692	1-215-445-00	METAL	10K	1%	1/4W	
R693	1-215-445-00	METAL	10K	1%	1/4W	
R694	1-215-437-00	METAL	4.7K	1%	1/4W	
R695	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R697	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R698	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R699	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R705	1-215-437-00	METAL	4.7K	1%	1/4W	
R706	1-215-437-00	METAL	4.7K	1%	1/4W	
R707	1-215-437-00	METAL	4.7K	1%	1/4W	
R708	1-215-437-00	METAL	4.7K	1%	1/4W	
R709	1-215-437-00	METAL	4.7K	1%	1/4W	
R710	1-249-397-11	CARBON	22	5%	1/4W	
R711	1-247-887-00	CARBON	220K	5%	1/4W	
R712	1-247-887-00	CARBON	220K	5%	1/4W	
R713	1-215-427-00	METAL	1.8K	1%	1/4W	
R714	1-215-427-00	METAL	1.8K	1%	1/4W	
R715	1-249-441-11	CARBON	100K	5%	1/4W	
R716	1-249-441-11	CARBON	100K	5%	1/4W	
R717	1-247-889-00	CARBON	270K	5%	1/4W	
R718	1-215-421-00	METAL	1K	1%	1/4W	
R720	1-215-421-00	METAL	1K	1%	1/4W	
R721	1-249-433-11	CARBON	22K	5%	1/4W	
R722	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R723	1-212-879-11	FUSIBLE	82	5%	1/4W	F
R724	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R725	1-212-879-11	FUSIBLE	82	5%	1/4W	F
R726	1-215-437-00	METAL	4.7K	1%	1/4W	
⚠R727	1-212-879-11	FUSIBLE	82	5%	1/4W	F
⚠R728	1-202-972-61	FUSIBLE	1	5%	1/4W	F
R729	1-215-449-00	METAL	15K	1%	1/4W	
R730	1-215-449-00	METAL	15K	1%	1/4W	
R731	1-215-449-00	METAL	15K	1%	1/4W	
R732	1-247-887-00	CARBON	220K	5%	1/4W	
R733	1-247-895-00	CARBON	470K	5%	1/4W	
R734	1-215-447-00	METAL	12K	1%	1/4W	
R735	1-215-445-00	METAL	10K	1%	1/4W	
R740	1-247-397-11	CARBON	22	5%	1/4V	

< VARIABLE RESISTOR >

RV601	1-238-478-11	RES, ADJ, CARBON 1M
RV602	1-238-478-11	RES, ADJ, CARBON 1M

< RELAY >

RY601	1-515-787-11	RELAY
RY602	1-515-787-11	RELAY
RY603	1-515-787-11	RELAY

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。従って交換時は，必ず指定の部品を使用して下さい。

TB

Ref. No.	Part No.	Description			Remark
*	A-4588-810-A	TB BOARD, COMPLETE ******************			
		< CAPACITOR >			
C501	1-164-159-11	CERAMIC	0.1uF		50V
C502	1-164-159-11	CERAMIC	0.1uF		50V
C503	1-130-471-51	MYLAR	0.001uF	5%	50V
C504	1-130-471-51	MYLAR	0.001uF	5%	50V
C507	1-126-967-11	ELECT	47uF	20%	50V
C508	1-136-177-00	FILM	1uF	5%	50V
C509	1-130-471-51	MYLAR	0.001uF	5%	50V
C510	1-137-193-51	FILM	0.39uF	5%	50V
C511	1-130-496-00	MYLAR	0.12uF	5%	50V
C512	1-130-490-11	MYLAR	0.039uF	5%	50V
C513	1-130-487-00	MYLAR	0.022uF	5%	50V
C514	1-126-967-11	ELECT	47uF	20%	50V
C515	1-164-159-11	CERAMIC	0.1uF		50V
C516	1-107-163-00	MICA	47PF	5%	500V
C519	1-126-967-11	ELECT	47uF	20%	50V
C520	1-126-967-11	ELECT	47uF	20%	50V
C522	1-126-967-11	ELECT	47uF	20%	50V
C525	1-126-967-11	ELECT	47uF	20%	50V
C526	1-126-967-11	ELECT	47uF	20%	50V
C527	1-124-903-11	ELECT	1uF	20%	50V
C528	1-126-967-11	ELECT	47uF	20%	50V
C529	1-124-903-11	ELECT	1uF	20%	50V
C530	1-126-967-11	ELECT	47uF	20%	50V
C535	1-126-967-11	ELECT	47uF	20%	50V
C537	1-126-967-11	ELECT	47uF	20%	50V
C538	1-164-159-11	CERAMIC	0.1uF		50V
C539	1-164-159-11	CERAMIC	0.1uF		50V
C542	1-126-942-61	ELECT	1000uF	20%	25V
C543	1-126-942-61	ELECT	1000uF	20%	25V
C544	1-126-967-11	ELECT	47uF	20%	50V
C545	1-130-467-00	MYLAR	470PF	5%	50V
		< CONNECTOR >			
CN5	1-750-177-11	PIN, CONNECTOR (PC BOARD) 15P			
CN6	1-564-523-11	PLUG, CONNECTOR 8P			
CN7	1-750-860-11	CONNECTOR, BOARD TO BOARD 16P			
CN8	1-750-860-11	CONNECTOR, BOARD TO BOARD 16P			
		< DIODE >			
D501	8-719-921-19	DIODE	1SS119-25TG		
D502	8-719-921-19	DIODE	1SS119-25TG		
D503	8-719-921-19	DIODE	1SS119-25TG		
D504	8-719-921-19	DIODE	1SS119-25TG		
D505	8-719-921-19	DIODE	1SS119-25TG		

Ref. No.	Part No.	Description			Remark
D506	8-719-921-19	DIODE	1SS119-25TG		
D507	8-719-921-19	DIODE	1SS119-25TG		
D508	8-719-921-19	DIODE	1SS119-25TG		
D509	8-719-921-19	DIODE	1SS119-25TG		
D510	8-719-921-19	DIODE	1SS119-25TG		
D511	8-719-955-04	DIODE	TLG113A		
D512	8-719-110-96	DIODE	RD2.0ES-T2B2		
		< IC >			
IC501	8-759-240-06	IC	TC4006BP		
IC502	8-759-240-06	IC	TC4006BP		
IC503	8-759-207-73	IC	TC4030BPHB		
IC504	8-759-916-52	IC	TC74HC165AP		
IC505	8-759-233-43	IC	TC74HC595AP		
IC507	8-759-710-59	IC	NJM4580D-D		
IC508	8-759-634-51	IC	NJM4558D		
IC509	8-759-634-51	IC	NJM4558D		
IC510	8-759-634-51	IC	NJM4558D		
IC511	8-759-634-51	IC	NJM4558D		
		< TRANSISTOR >			
Q501	8-729-195-23	TRANSISTOR	2SA952TP-K1		
Q502	8-729-207-46	TRANSISTOR	2SC3112B-TPE2		
Q503	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
Q504	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
Q505	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
Q510	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
Q511	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
Q512	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
Q513	8-729-030-03	TRANSISTOR	DTC144ESA-TP		
		< RESISTOR >			
R502	1-247-883-00	CARBON	150K	5%	1/4W
R503	1-247-883-00	CARBON	150K	5%	1/4W
R504	1-247-883-00	CARBON	150K	5%	1/4W
R507	1-215-445-00	METAL	10K	1%	1/4W
R508	1-247-843-11	CARBON	3.3K	5%	1/4W
R509	1-215-421-00	METAL	1K	1%	1/4W
R510	1-249-411-11	CARBON	330	5%	1/4W
R511	1-247-807-31	CARBON	100	5%	1/4W
R512	1-215-431-00	METAL	2.7K	1%	1/4W
R513	1-215-431-00	METAL	2.7K	1%	1/4W
R514	1-247-887-00	CARBON	220K	5%	1/4W
R515	1-247-887-00	CARBON	220K	5%	1/4W
R516	1-247-887-00	CARBON	220K	5%	1/4W
R517	1-215-437-00	METAL	4.7K	1%	1/4W
R518	1-249-432-11	CARBON	18K	5%	1/4W
R519	1-247-887-00	CARBON	220K	5%	1/4W

Ref. No.	Part No.	Description				Remark
R520	1-249-432-11	CARBON	18K	5%	1/4W	
R521	1-249-437-11	CARBON	47K	5%	1/4W	
R522	1-215-445-00	METAL	10K	1%	1/4W	
R523	1-247-887-00	CARBON	220K	5%	1/4W	
R524	1-215-445-00	METAL	10K	1%	1/4W	
R525	1-215-445-00	METAL	10K	1%	1/4W	
R526	1-215-445-00	METAL	10K	1%	1/4W	
R527	1-215-445-00	METAL	10K	1%	1/4W	
R528	1-215-445-00	METAL	10K	1%	1/4W	
R529	1-215-445-00	METAL	10K	1%	1/4W	
R530	1-215-421-00	METAL	1K	1%	1/4W	
R531	1-215-437-00	METAL	4.7K	1%	1/4W	
R532	1-215-421-00	METAL	1K	1%	1/4W	
R533	1-215-437-00	METAL	4.7K	1%	1/4W	
R534	1-247-887-00	CARBON	220K	5%	1/4W	
R535	1-215-437-00	METAL	4.7K	1%	1/4W	
R536	1-247-887-00	CARBON	220K	5%	1/4W	
R537	1-215-437-00	METAL	4.7K	1%	1/4W	
R539	1-215-440-00	METAL	6.2K	1%	1/4W	
R541	1-215-440-00	METAL	6.2K	1%	1/4W	
R542	1-215-445-00	METAL	10K	1%	1/4W	
R543	1-215-445-00	METAL	10K	1%	1/4W	
R544	1-215-445-00	METAL	10K	1%	1/4W	
R545	1-215-445-00	METAL	10K	1%	1/4W	
R546	1-249-433-11	CARBON	22K	5%	1/4W	
R547	1-249-414-11	CARBON	560	5%	1/4W	
R548	1-247-843-11	CARBON	3.3K	5%	1/4W	
R549	1-215-449-00	METAL	15K	1%	1/4W	
⚠R550	1-212-869-00	FUSIBLE	33	5%	1/4W	F
R551	1-249-437-11	CARBON	47K	5%	1/4W	
R552	1-249-437-11	CARBON	47K	5%	1/4W	
R553	1-215-421-00	METAL	1K	1%	1/4W	
R554	1-215-421-00	METAL	1K	1%	1/4W	
⚠R555	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R556	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
⚠R557	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R558	1-215-445-00	METAL	10K	1%	1/4W	
R559	1-215-441-00	METAL	6.8K	1%	1/4W	
R560	1-215-445-00	METAL	10K	1%	1/4W	
R561	1-215-449-00	METAL	15K	1%	1/4W	
R562	1-215-405-00	METAL	220	1%	1/4W	
R563	1-215-405-00	METAL	220	1%	1/4W	
R564	1-247-887-00	CARBON	220K	5%	1/4W	
R565	1-249-437-11	CARBON	47K	5%	1/4W	
R566	1-247-887-00	CARBON	220K	5%	1/4W	
R567	1-249-437-11	CARBON	47K	5%	1/4W	

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
SW1	1-571-212-11	SWITCH, SLIDE	
SW2	1-572-004-11	SWITCH, PUSH	
SW3	1-572-004-11	SWITCH, PUSH	
SW4	1-572-004-11	SWITCH, PUSH	
SW5	1-572-004-11	SWITCH, PUSH	
SW6	1-572-004-11	SWITCH, PUSH	
SW7	1-572-004-11	SWITCH, PUSH	
SW8	1-554-824-21	SWITCH, PUSH (1 KEY)	
**			
*	1-660-912-11	TR BOARD ********	
		< CAPACITOR >	
C401	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
CN401	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
		< DIODE >	
D401	8-719-113-56	DIODE RD22ES-T2B2	
		< IC >	
IC401	8-759-144-82	IC uPC2405HF	
		< TRANSISTOR >	
Q401	8-729-321-14	TRANSISTOR 2SC4388-Y	
**			
		MISCELLANEOUS *************	
7	1-777-452-11	CABLE (WITH CONNECTOR)	
8	1-777-067-11	CABLE (WITH CONNECTOR)	
57	1-777-066-11	CABLE (WITH CONNECTOR)	
58	1-777-067-11	CABLE (WITH CONNECTOR)	
107	1-777-453-11	CABLE (WITH CONNECTOR)	
108	1-777-454-11	CABLE (WITH CONNECTOR)	
157	1-777-455-11	CABLE (WITH CONNECTOR)	
158	1-777-456-11	CABLE (WITH CONNECTOR)	
216	1-225-271-11	RES, SLIDE CARBON VAR 10K	
263	1-225-273-11	RES, SLIDE CARBON VAR 10K/10K	
309	1-563-354-11	CONNECTOR, BNC	
323	1-225-271-11	RES, SLIDE CARBON VAR 10K	
324	1-543-798-11	FILTER, CLAMP	
325	1-508-942-12	CONNECTOR 14P	
**			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.	⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。従って交換時は，必ず指定の部品を使用して下さい。

Ref. No.	Part No.	Description	Remark
		*************	
		HARDWARE LIST	
		*************	
#1	7-685-662-79	SCREW +BVTP 4X14 TYPE2 SLIT	
#2	7-682-577-09	SCREW +B 5X14	
#3	7-682-247-09	SCREW +RK 3X6	
#4	7-682-547-09	SCREW +B 3X6	
#5	7-621-773-95	SCREW +B 2.6X6	
#6	7-682-547-04	SCREW +PTT 3X6 (S)	
#7	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT	
#8	7-623-308-07	LW 3, TYPE (A)	
#9	7-682-551-09	SCREW +B 3X14	
#10	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT	
#11	7-621-772-10	SCREW +B 2X4	
#12	7-682-548-09	SCREW +B 3X8	

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	ACCESSORIES & PACKING MATERIALS		
	*******************************		
	2-344-733-01	MANUAL, INSTRUCTIONS	
	3-800-983-01	INSTRUCTION	

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